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Clinical Medicine and Surgery

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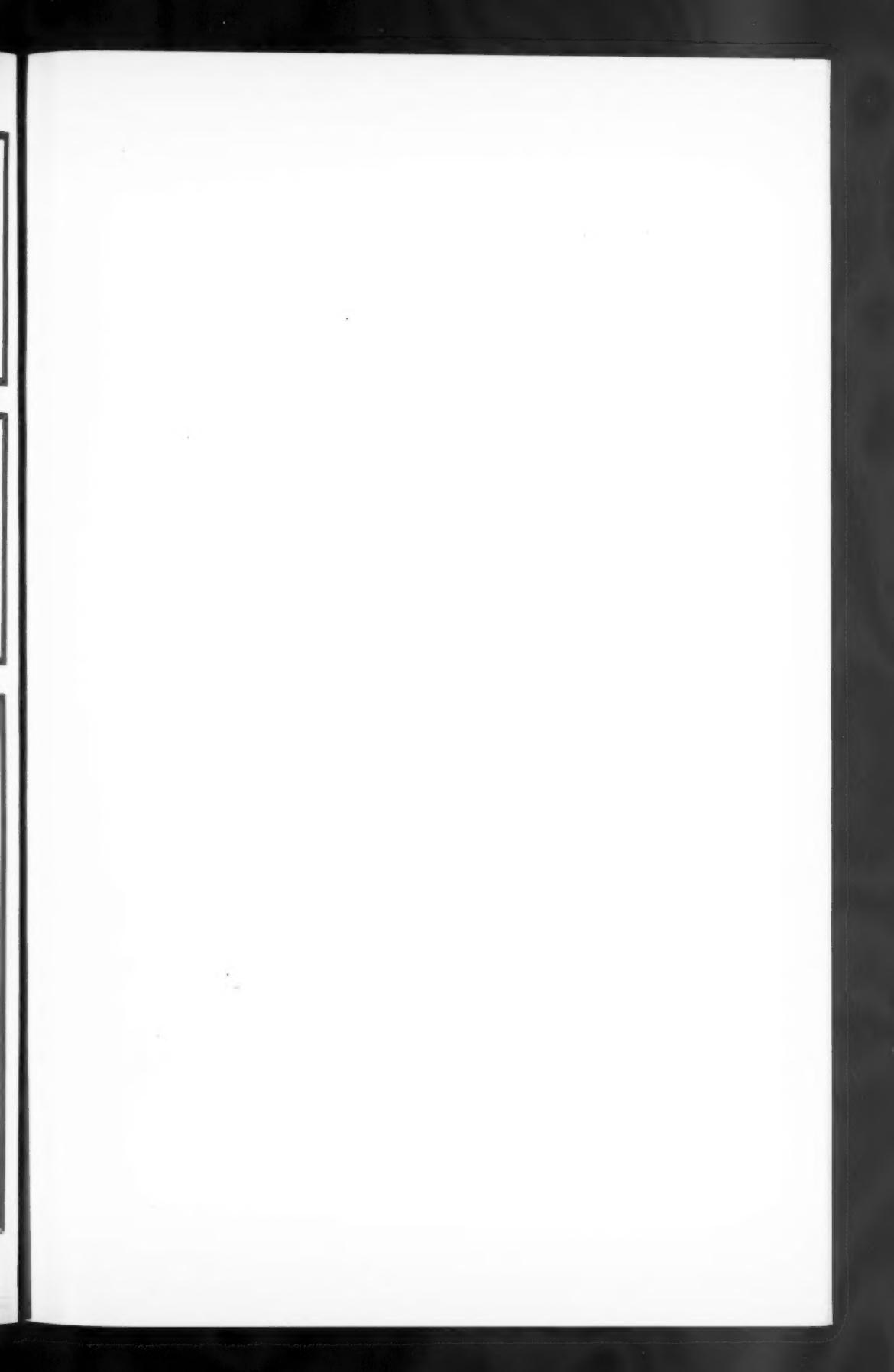
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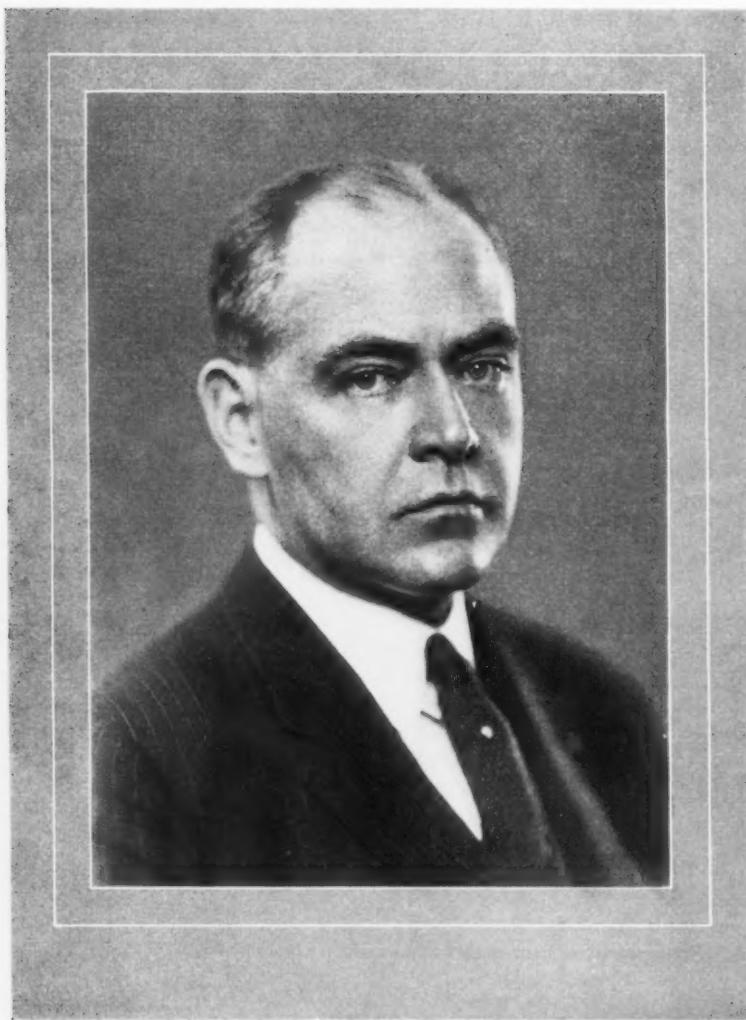
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PRESIDENT, AMERICAN COLLEGE OF PHYSICIANS



CLINICAL MEDICINE AND SURGERY

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Dr. John H. Musser

WHEN one sees a name on the title page of a widely-used and authoritative medical textbook, one is apt to feel that the author must be a venerable person, in order to have acquired so much knowledge and wisdom, but such an impression is sometimes a great mistake, as is well shown by the portrait of the author of "Musser's Medical Diagnosis".

John Herr is the son of John H. and Agnes (Harper) Musser, and was born in Philadelphia, Pa., August 9, 1883.

Having completed his elementary studies, he entered the University of Pennsylvania, from which institution he was graduated, in 1905, as a Bachelor of Science, and in 1908 as a Doctor of Medicine. Three years after his graduation he married Miss Marguerite Hopkinson, and has a daughter and a son.

In 1912, he was appointed assistant physician to the Presbyterian Hospital, Philadelphia; in 1914, physician to the Philadelphia General Hospital; and in 1919 physician to Howard Hospital. All these positions he held until he left Philadelphia, in 1924.

Dr. Musser was called to be associate in medicine at the University of Pennsylvania in 1915, and was made assistant professor in 1919. From 1919 to 1924

he was editor of the *American Journal of the Medical Sciences*.

During the War he was a Lieutenant, Captain and, finally, Major in charge of the University of Pennsylvania Base Hospital Unit No. 20, at Chatel Guyon, France.

In 1925, Dr. Musser's qualifications as a medical teacher were recognized by the call to the professorship of medicine at Tulane University, New Orleans, La., which position, as well as that of physician to Charity Hospital, New Orleans, he still holds.

He is a member of his County and State medical societies; a fellow of the American Medical Association and a member of the American Climatological and Clinical Association, the American Society for Clinical Investigation, the Association of American Physicians, the Society for Experimental Biology and Medicine and the Southern Medical Association. His selection, in 1928, to the position of president-elect of the American College of Physicians, of which he has been a regent for several years, was a well-merited honor. He assumed office at the Boston meeting in 1929.

Dr. Musser's contributions to the periodical medical literature have been numerous and important; in addition to which

he has been concerned, as author or co-author, with the publication of several valuable medical textbooks: "Medical Diagnosis", "Handbook of Practical Treatment" (with A. O. J. Kelly), etc. He was also the editor of the thirteenth and fourteenth editions of Anders' "Practice of Medicine".

It is somewhat rare that a man attains such a preeminent position in his profession as that occupied by Dr. Musser, at the age of forty-six years, and such an occurrence bespeaks large natural endowments and continuous personal industry and enthusiasm for study and investigation, as well as that ability to impart information which is the rare gift of those who make their mark as teachers in any line.

When new turns in the behavior cease to appear in the life of an individual his behavior ceases to be intelligent.—G. E. Coghill.

UPLIFTING THE MEDICAL PROFESSION

THE woods and boulevards are infested with "uplifters," these days, and there seem to be a good many persons who are interested in doing something for the poor, down-trodden doctors. They haven't done much, as yet, but they talk a lot about it.

One fact which seems to be overlooked, in this and similar connections, is that human society with all its branches and ramifications, is composed of just plain people, and that the groups they form and the way those groups function is a fair index of the state of development and general outlook of the individuals who compose them.

All human society needs improvement, Heaven knows! And the medical profession is a very important section of that society; so there is no reason why we should not be "uplifted." We are apt, however, to show a not unnatural resentment when some outsider essays to do the job. We feel perfectly competent to do that sort of thing for ourselves, but we are not getting on with it very rapidly, because we are attacking the problem from the wrong end.

The main difficulty seems to be that we suffer from the almost universal failing of manifesting a pernicious eagerness to improve *somebody else*, while holding the equally common impression that we, personally, are just about the last word.

If the medical profession is to rise (and there is no question that it must and will do so), it will have to come up like a loaf of bread, because of the yeast inside; rather than like a hod of bricks carried upstairs on somebody's shoulder.

There are things wrong with the medical profession (there always have been—this is no new condition of affairs), but at bottom they are merely the things that are wrong with individual physicians. If every medical man gave every patient the thorough and conscientious examination and study he deserves, the public would not be crying for cheap clinics. If every one of us thought of his patients and his profession first, and his own comfort and convenience second, the problems of medical organization and sociology would be solved.

Self-preservation is essential to continued existence; but, in the community life of today, the welfare of the individual cannot, in any manner, be disconnected from the welfare of the group. We say we do thus and so for our own protection when, as a matter of fact, most of our sins of omission and commission are committed because we are lazy and love comfort better than efficiency.

If we do not want the Government or some of its agencies to go farther in regulating us, it is time we awake to the fact that we must regulate ourselves, one by one. Uplifting, like charity, should begin at home—so close at home that it lays hold of the fellow who wears our pajamas to bed.

Let us put up the binocular louse, with which we have been so industriously searching for the mote in our brothers' eyes, and take a whirl at endeavoring to extract the timbers from our own corneas,

shouting, meanwhile the inspiring slogan:
 WHEN THERE ARE BETTER DOCTORS, WE
 WILL BE THEM!

Never try to curb force, but to direct it into
 useful and profitable channels.—C. Jinarajadasa.

A DEGREE IN DOMESTIC SCIENCE

ON THE face of it there is nothing heroic in washing dishes and cooking meals and making beds. Few there be who sing the praises of the housewife, even in private. Her efforts are, all-too-often, unrewarded and unappreciated.

Housework has always been a confining job and, because it was done in the kitchen, in a Mother Hubbard or its modern equivalent, instead of in the parlor, in a silk gown, it has come to be regarded as a menial occupation. These are some of the reasons why it is now so difficult to employ competent help in the family.

The world has moved, in the past half-century, but women are, by tradition and training, conservative. Housework is not the drudgery it was in the times of our mothers and grandmothers—electricity and gas have made a wonderful difference, both in the nature of the work to be done and the time it takes to do it. The modern housewife can accomplish, in a few hours, tasks which kept her mother busy from sunrise to sunset, and do it so much more easily that she is fresh and ready for a movie or a bridge party in the evening.

Moreover, people are coming to realize that the competent management of a household means more than cleaning the sink and mending the family socks. The housewife is the disbursing member of the domestic partnership, and the financial success of the concern depends as much upon an intelligent control of expenditures as it does upon a regular and generous income. Also, personal success, for the homekeeper and the breadwinner alike, depends upon personal achievement.

If a woman studies medicine, law, architecture, engineering, nursing or any of the other professions, she can write certain

mystic letters after her name, that command the attention and respect of the community. Even if she dabbles for four years in languages, history, mathematics and other "cultural" studies she can sign herself a Bachelor of Arts (or Literature or Science or whatever), which gives her a certain prestige. But if she spends the same time and energy in learning how to be an effective and instructed wife and mother, she is just plain Mrs. Jones, housewife, and few people ever give a thought to her accomplishments.

In some ways they do things better in France. There, when a woman gains especial skill as a cook, she is given the decoration of the *Cordon Bleu*, as a badge of distinction. After that, her neighbors and the public look up to her as *somebody*.

The woman who can write "R.N." after her name can command (and *earn*) higher pay than the (perhaps) equally willing but uninstructed practical nurse. Could not a cook or a maid, *with a degree*, do the same?

Why not establish a degree, B.D.S. (Bachelor of Domestic Science), with, possibly, additional recognition as Masters of the same subject, conferred for advanced postgraduate work? Would it not add dignity and purpose to the studies and labors of the housekeeper if we should recognize (what is already a fact) that the management of a home is a complicated and exacting art and science (embracing, among other things, dietetics, economics, child psychology and training, interior decorating, personal efficiency, etc., as well as cooking, washing and sweeping), worthy of recognition by the world?

If there is any profession more important to the public welfare than that of parenthood, it would be hard to name.

A byproduct of the dignifying of housework in this way would be a reduction in the increasing crop of neuroses and psychoneuroses with which the medical profession has to cope. No human being can continue to function, happily and effec-

tively, unless he (or she) is sustained by a sense of personal accomplishment and progress. Any scheme which would make women more intelligent and efficient workers (especially if dignities and public recognition be added) would raise their morale and make their lives richer and more satisfying.

It is no longer true or reasonable that "woman's place is in the home." Her place is where she fits in best and works most productively and joyously. But many women would be thoroughly satisfied and happy if they could be taught how to be *really good* housekeepers and home-makers and, as the pedagogic machinery seems to be, as yet, largely in the hands of men, it appears to be "up to" the masculine component of the population to "start something," which the women can be confidently counted upon to finish.

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The home is not the house but a woman.—Old Japanese Adage.
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ANIMAL EXPERIMENTS NECESSARY TO MEDICAL PROGRESS

THE Philadelphia Public Ledger, for March 27, 1929, carried a notice of a meeting of the Philadelphia County Medical Society, at which such notable men as Drs. John A. Kolmer and W. W. Keen deplored the restrictions which have been imposed upon the progress of medical research by the activities of those rabid and, mostly, wholly uninformed fanatics, the antivivisectionists.

Dr. Kolmer stated that the teaching of bronchoscopy, by Dr. Chevalier Jackson, is now seriously hampered by his inability to procure dogs for demonstration purposes. If such a state of things had existed some years ago, the bronchoscope could, in fact, not have been developed, and the many lives this instrument has saved would have been sacrificed to the puerile fanaticism of a group of soft hearted (and headed!) agitators.

Without animal experimentation we

should now have no antitoxins against diphtheria, rabies, scarlet fever, meningitis, pneumonia and a number of other diseases, and the whole subject of the cause and cure of infectious maladies would still be where it was in the Dark Ages.

Without animal experimentation we should not now have insulin, the arsphenamines (all of which must be tested on white rats before they can be marketed), the barbituric acid series of hypnotics, ephedrine and epinephrin, and a host of other remedies which are saving thousands of lives and preventing untold suffering every year.

Without animal experimentation, the hope of finding the cause and cure of cancer—the terrible menace of the twentieth century—would fade away, and with it the whole structure of our modern medical science. We should revert, in large measure, to the therapeutic practices of the benighted savage, who pounds upon a tom-tom and shakes a rattle of snake's teeth and tiger claws to drive away the "evil spirits" which are tormenting the unfortunate patient.

Nor are the beasts, which are so carefully sacrificed upon the altar of science, conferring benefits solely upon members of the human race. These experiments are daily saving the lives and relieving the distress of hundreds of animals, all over the world. Rabies, anthrax, tuberculosis, hog cholera, rinderpest, Texas fever and other diseases formerly killed thousands of our four-footed brethren, where they now destroy but tens or hundreds. Even instruments, such as the bronchoscope, are used not rarely in saving the lives of the very class of animals whose sacrifice has made their development possible.

Here is a worthy work for medical organizations and for individual physicians: To spread, by public lectures, personal instruction and by the written word, a knowledge of the true facts and of the immeasurable importance of the use of animals for scientific experimentation.

No true scientist approaches work of this sort without regret that innocent lives must be snuffed out, that other beasts, as well as men, may live in health and happiness: And no efforts are spared to abolish the pain of the creatures which must be used in this way, in spite of the vociferous ullulations of the misguided zoophiles who prefer a pampered lap-dog to a rosy child and who, as Dr. Charles F. Nassau remarked, appear to have no intelligence whatever.

We must meet the propaganda of false and mawkish sentimentality with the sane propaganda of truth and reason, and the time to go to work at it is NOW!

The basis of Medicine is sympathy and the desire to serve; and whatever is done to that end must be called Medicine.—Dr. C. F. Martin.

THE STUDY OF HUMAN BEINGS

HERE are two ways in which two different types of physicians look upon sick people: They may be considered as animated test-tubes or laboratory animals, in whom the minutiae of pathologic processes may be studied, impersonally; or as suffering fellow men, appealing for succor to those who should be able and eager to help them. No man whose bent of mind might place him in the former class should ever attempt or aspire to be a clinician.

Our fathers in the profession treated human beings who were ill, and they almost made up, in kindly sympathy and eagerness for service, the deficiencies (according to modern standards) in their scientific knowledge.

It is not, however, sufficient that we do, today, the things that were done by the great physicians of fifty or a hundred years ago. Much scientific knowledge is here and available, and no man can be excused for not knowing the things which he might have known had he been willing to make the necessary effort.

But, with increasing knowledge, has come, in many cases, confusion and uncertainty. Those who knew little or nothing of psychology, and nothing whatever about

the endocrines, proceeded with confidence, in ignorance of these matters. We know just enough to make us realize our lack of complete and positive information, and our practice frequently suffers from the timidity engendered by a realization of our limitations. We are not so ready to put the "criminal" the "lunatic" and the "neurotic" in neat little, water-tight compartments, and dogmatize about how to handle them.

Human life is not as the lives of the dog and the horse. In addition to recognizable alterations in the structure and functions of the physical organs, we must reckon with complicated emotional and mental reactions, arising by reason of our complex human relationships. The physiologist and the pathologist can no longer give us all the information we need to practice medicine satisfactorily: We require the help of the psychologist, the sociologist, the economist and all the others who are studying *men*, from any aspect whatever.

This need has, at last, been recognized and a step toward meeting it has been taken with the establishment, in connection with Yale University, of an Institute of Human Relations. President Angell announces that \$7,500,000 are now available for this purpose.

In the beginning, the medical and law schools will collaborate in coordinating and studying the material at hand and in collecting new material. As other departments become interested and show that they have something to add to the consideration of the problems involved, they will join in.

Here is an evidence of progress in the right direction, and much will be gained, immediately, if it convinces certain physicians that a sick man is not a Robot, to be repaired as one would repair a broken-down sewing machine, but a human soul, reacting with and being reacted upon by other human souls, all of them incased in physical, emotional and mental bodies which are highly susceptible to the effects of these reactions.

When all doctors are regularly practicing

medicine upon such a basis as this, we will see fewer failures in treatment and a greater degree of confidence and happiness in the exercise of the healing art, founded upon and supported by all branches of modern science.

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Happiness is not a gift: It does not depend upon temperament or lack of temperament, or even on wealth or health. It is a sort of diplomatic relation we maintain toward ourselves and other people.—
Mary Lee Lake.

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THE PORTLAND MEETING

THE American Medical Association has arranged its meeting this year so that it makes a peculiarly favorable opportunity to combine business with pleasure and a splendid excuse to take a delightful vacation, in connection with postgraduate study.

The meeting will be held at Portland, Oregon, July 8 to 12, 1929, and is certain, as always, to give those who attend it a splendid program of instruction, as well as an occasion to see, in person, all of the new drugs, apparatus and procedures which the past few years have brought forth. The meeting with old friends and with men prominent in the profession, which many consider purely incidental, is by no means the least important and valuable feature of an occasion like this.

From the recreational standpoint, the trip to Portland takes one through the scenic wonderland of the United States,

and the railroads are arranging stop-overs and side tours, so as to give the physicians and their families a chance to see some of the places they have read and dreamed about, at very slight additional expense. Yellowstone Park, with its canyons, hot springs, geysers and glorious mountain vistas, may easily be made a part of the joys of this excursion.

At Portland one may observe the remarkable development which has taken place in our great Northwest Country and gain a truer idea of the magnitude and variety of this land of ours.

Remember that, this year, the expenses of the trip can be deducted on the next income tax return, and be sure to take receipts for money paid for railroad tickets, hotel charges and all other necessary expenditures.

Take the family, too, and have a real outing and the kind of a rest that most of us sadly need. The doctors of Portland and their ladies can be depended upon to furnish a program of entertainment for the visiting wives and daughters, which will make them hate to leave the place.

The officials of the Association have spent much time and effort in giving us a chance for enlargement of our knowledge and for professional advancement. Let us show our appreciation of their efforts by turning out in such numbers that they will be encouraged to even greater exertions on our behalf in the future.

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Sib

Cool water noises and the stirring leaves
Are ME, for I am one with every other.
The nimble chipmunk, watching unafraid,
Knows we are kin. Come closer little brother.

G.B.L., in "An Apostle of Joy".

LEADING ARTICLES

The Administration of Insulin in Suspension*

By O. LEYTON, M.D., D.Sc., F.R.C.P., London, Eng.
Physician to the London Hospital

DELIBERATION over the inadequate treatment of one disease occasionally leads to the benefit of patients suffering from another.

Many years ago the tortures suffered by children in whom pericardial adhesions had led to enormous hypertrophy of the heart made me seek some means of preventing the development of this condition. I thought that perhaps the introduction of a nonabsorbable oil, such as liquid paraffin, if introduced during the period of effusion, might prevent the adhesion of the visceral and parietal layers of the pericardium.

I began work by introducing liquid paraffin into the pleural cavities of guinea pigs and found that it was an efficient method of preventing adhesion when inflammation was produced by injection of aleuron. This has led to the use of liquid paraffin in pleural effusion and has benefited many patients suffering from that complaint, but has not been used to any extent in the much less frequent condition, pericardial effusion.

The origin of the work which I am recording in this paper, too, began in an indirect manner. In the treatment of diabetes insipidus, the injection of five units of some extracts of pituitary gland will control the flow of urine for about four hours. If 10 units be given the control may extend to six hours; but the disadvantage of giving 10 units is that, in susceptible subjects, it may lead to a contraction of the bowel. Any further in-

crease in the dose does not increase to any appreciable extent the length of time that the diuresis is controlled.

Recently I have been supplied with extracts of pituitary gland which contained some quantity of anti-diuretic material and very little vasopressin. Injection of this preparation does not lead to discomfort, but it does not contain the substance which causes constriction of the blood vessels and, therefore, its absorption is rapid and it follows that its action does not extend over so long a period as if it were slowly absorbed. It occurred to me that perhaps, by making an emulsion, I might delay absorption and control the diuresis for 24 hours by a single injection. The anti-diuretic substance in pituitary extract is not supplied in a dry state and, therefore, it seemed wise to transfer the observations to some other substance for a time and return to the treatment of diabetes insipidus at a later date.

THE LIBERATION OF INSULIN

I began experiments upon the delay of the absorption of insulin and asked one of the manufacturers of that drug to supply me with it suspended in oil, thinking that by administering it in suspension the action would be less intense and more prolonged. At first sight it seemed doubtful whether much would be gained, because it was generally accepted that the best way of giving insulin was by injecting, shortly before a meal, the amount needed to katabolize the carbohydrates in that meal. Upon further consideration, however, one is forced to the conclusion that insulin

*In order to secure prompt publication of this interesting article, the proofs could not be submitted to the author for correction.—Ed.

is liberated continuously, but a larger supply is liberated when the sugar in the blood rises above a certain limit. The evidence for this conclusion lies in the following facts:

1.—That neoplasm of the islands Langerhans leads to death from hypoglycemia.

2.—That persistent hypoglycemia may occur in individuals who have never received insulin and who, upon exploratory laparotomy, do not present any enlargement of the pancreas. These die if they are not fed with carbohydrate at short intervals.

3.—Cases of persistent hypoglycemia may occur following the administration of insulin. I have seen the sugar in the blood fall to 0.03 percent, although insulin had not been given during the previous 10 days. One imagines that, in these cases, the pancreas continues to secrete insulin slowly, whilst there is some diminution in the activity of glycolytic ferment.

4.—During sleep carbohydrate must be burnt—some from the glycogen stored in the liver and tissues and some from the protein which is broken down—and for this purpose insulin must be supplied. In the normal individual the concentration of sugar in the blood during the night does not rise sufficiently high to stimulate the production of insulin. If carbohydrate katabolism were to cease during the night, ketosis would develop in some.

If the pancreas were to secrete insulin only when the sugar in the blood rose above 0.16 percent, it would be difficult to imagine how hypoglycemia could be produced in any way other than by the direct injection of insulin.

THE MEDIUM OF SUSPENSION

At first it seemed to me probable that an emulsion might be made with the help of lecithin, but although this proved to be possible, nevertheless it was soon abandoned because it was found that the preparation was not stable.

I then asked for suspension of pure, dry insulin in oil, and Dr. Underhill was so good as to make some experiments in this direction. He found that if insulin were ground up with oils and then centrifuged, some kept the insulin in suspension, whilst others allowed it to settle: Probably this depends upon the specific gravity of the oil and also its viscosity and the fine state of division of the insulin.

Arachis oil suspended 60 units per

cubic centimeter and possessed many properties which recommended it for use, but unfortunately a certain percentage of patients complained of pain after its injection.

Castor oil was then tried. This oil can suspend more than 100 units per cubic centimeter of the insulin prepared by the British drug houses. The specific gravity of this oil is about 0.964, against arachis oil, 0.918. I found that castor oil did not give pain. No doubt a better medium will be used shortly, but for the present it suffices. The suspension appears to be stable and the insulin does not deteriorate rapidly.

THE METHOD OF INJECTION

Obviously a viscous oil must be injected in a different manner from an aqueous solution. The points which should be observed are:

1.—The oil should be warmed before injection, in order to reduce its viscosity.

2.—A thick (large caliber) needle must be used to draw it into the syringe.

3.—A needle less fine than that used for aqueous solutions must be chosen for the actual injection; it should also be short.

4.—A screw-down syringe may be used if the muscles of the thumb of the injector be weak.

5.—Lastly, but most important of all, the injection must NOT be intramuscular, but subcutaneous. Experience has shown that the least discomfort follows injection under the skin of the abdomen, the injection being given before the patient rises in the morning.

METHODS OF DETERMINING WHICH CONCENTRATION OF INSULIN IN SUSPENSION IS THE MOST SATISFACTORY

In my opinion there is a tendency to make all patients conform to the same rules—a procedure which saves work but prevents the attainment of the best results. For instance, many advise that the injection of insulin in solution be given 20 minutes before a meal, but investigation has taught me that some patients derive more benefit by receiving the insulin 5 minutes, others up to 90 minutes, before the meal.

It is unreasonable to expect that every individual will absorb oleum ricini, given subcutaneously, at the same rate, or that they will need the same flow of insulin into their tissues. I have, therefore, made observations with suspensions containing

100, 50 and 25 units per cc. When opportunity offers, it is undoubtedly wise to take samples of blood at short intervals and estimate the concentration of sugar in them. If the fall be rapid after the injection, it would be wise to diminish the concentration of insulin in the oil, and vice versa. If there be no opportunity of estimating the sugar in the blood, one of the two following methods may be used:

1.—After an injection of a suspension containing 100 units of insulin per cc., urine may be passed every two hours and a note made as to how long it takes for sugar to be excreted in recognizable quantity. This experiment should be continued for two or three days and then the same dose of insulin should be injected in a larger volume of oil and once more observation should be made to see when glycosuria begins, ends and re-commences. By trying different doses and different concentrations, glycosuria may be abolished completely, provided the diet is not greatly excessive and the patient is not completely resistant to insulin.

2.—The urine passed during 24 hours is collected, mixed and measured and the percentage of sugar in it estimated. This is repeated for three days; then the same dose of insulin, but in a different concentration, is given and observations are made as to whether the sugar excreted is increased or diminished. Usually this gives a clue as to how it can be abolished completely.

COMPARATIVE RESULTS

Chart 1 illustrates the effect of insulin upon a patient suffering from moderate dia-

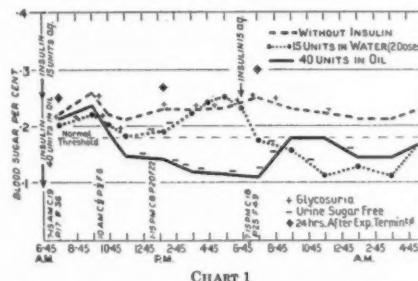


CHART 1

betes mellitus. His diet consisted of: breakfast, carbohydrate 19 Gm., protein 17 Gm., fat 36 Gm.; lunch at 10 A.M., consisting of carbohydrate 0.5 Gm., protein 0.5 Gm., fat 6 Gm.; dinner at 1:15 P.M. carbohydrate 8 Gm., protein 20 Gm., fat 22

Gm.; supper at 7:15 P.M., carbohydrate 18 Gm., protein 25 Gm., fat 49 Gm.

This diet was arranged for two doses of an aqueous solution of insulin—one given at 6:45 in the morning and the second at 6:45 in the evening. The dotted line shows the rise and fall of the sugar in the blood on that diet and dosage of insulin.

The following day, 40 units of insulin in oil were administered at 6:45 A.M., and the black, continuous line shows the rise and fall of the concentration of sugar following that. In all probability the line would have been somewhat flatter if the midday meal had contained more carbohydrate and the evening meal rather less, but the comparison was made with the diet arranged from best results with the two injections.

The broken line shows the sugar in the blood when insulin was not given; but apparently the effect of insulin is carried over for more than 24 hours and, on making estimations on the second day after the cessation of insulin, sugar in the blood was found to rise to 0.3 percent at 7:30 P.M.

Chart 2.—A patient suffering from somewhat more severe diabetes mellitus re-

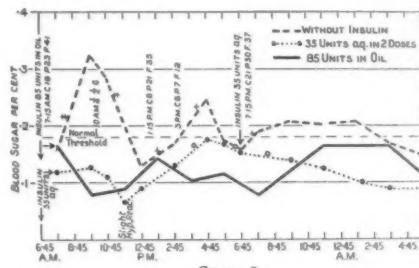


CHART 2

ceived a diet consisting of: breakfast, carbohydrate 18 Gm., protein 23 Gm., fat 41 Gm.; morning lunch, carbohydrate 0.25 Gm., protein 0.5 Gm., fat 6 Gm.; at 1:15 P.M., carbohydrate 8 Gm., protein 21 Gm., fat 35 Gm.; at 3 P.M., carbohydrate 8 Gm., protein 7 Gm., fat 12 Gm.; at 7:15 P.M., carbohydrate 21 Gm., protein 30 Gm., fat 37 Gm.

After the morning dose of 35 units of insulin in watery solution, the sugar in the blood fell, at 11 o'clock, sufficiently low to produce symptoms of hypoglycemia. Towards 5 p.m., the sugar in the blood approached the threshold, started falling, fell and continued to fall after the evening dose, at 6:45, of 35 units of insulin.

When observations were made upon the action of insulin in oil, the sugar in the blood started considerably higher than on the day chosen for observation with aqueous solution of insulin, and fell well below 0.1 percent, but not sufficiently low to give rise to symptoms of hypoglycemia. Sugar in the blood remained below 0.15 percent until 11 o'clock at night, when it rose to 1.7 percent. I have little doubt that there, too, if some of the carbohydrate given at the evening meal had been transferred to lunch or tea, the sugar in the blood would not have risen so high. The third (broken) curve shows the rise and fall of the sugar in the blood when insulin was withheld. The sign O indicates that sugar was not found in the urine, whilst the sign + indicates that sugar was present in the urine.

Chart 3.—Observations were made upon a severe case of diabetes mellitus—so severe

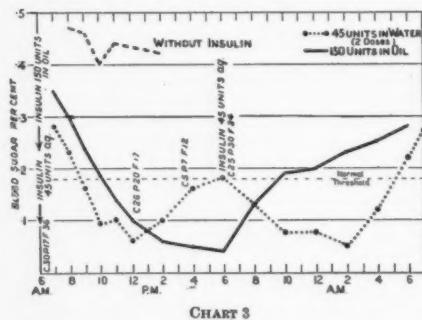


CHART 3

that the omission of one morning dose of insulin led to symptoms of ketosis, developing towards 2 P.M. and the sugar in the blood rising above 0.45 percent.

The patient's diet was quite liberal: Breakfast: Carbohydrate, 30 Gm.; Protein, 17 Gm.; Fat, 36 Gm. Midday: Carbohydrate, 26 Gm.; Protein, 20 Gm.; Fat, 17 Gm. Tea: Carbohydrate, 5 Gm.; Protein, 7 Gm.; Fat, 12 Gm. Evening: Carbohydrate, 25 Gm.; Protein, 30 Gm.; Fat, 24 Gm.

Examination of Chart III illustrates very definitely that all patients suffering from diabetes mellitus should not be submitted to identical treatment. This patient was able to absorb insulin in suspension at too rapid a rate when it was introduced in a concentration of 90 units per cubic centimeter; the effect was too transient and no insulin was available for the metabolism of the evening meal. The total amount of carbohydrate utilized was less, by 50 Gm., than when two injections of aqueous insulin were administered, and this in spite of the dose being larger.

I was forced to the conclusion that it would be advisable to decrease the concentration of the suspension. When the same dose of insulin was injected, but in a concentration of 50 units per cubic centimeter, a greater amount, by 50 Gm., of carbohydrate was utilized than when the two aqueous injections were administered. In other words, diminishing the concentration led to 80 Gm. less sugar appearing in the urine.

I claim that this new method of administering insulin will lead to more recoveries from diabetes mellitus. In my practice some dozen patients have made a real recovery from true diabetes mellitus, but these have been confined to a section of patients who, for month after month, have kept the concentration of sugar in their blood continuously below 0.15 percent. The prolonged action of insulin in suspension will make this much less difficult to attain.

No doubt it will occur to many that there are many drugs, the action of which should be prolonged and which, therefore, may with advantage be administered in oil suspension.

It is with the greatest of pleasure that I record my very best thanks to my First Assistant, Dr. F. B. Byrom, who carried out numberless estimations and sacrificed many hours of sleep in order that the records of cases might be complete. Dr. Steele and Miss Simmons, the dietitian to the Hospital, rendered invaluable assistance.

92, Portland Place, W. I.

Chronic Irritation as the Cause of Cancer of the Mouth, Skin, and the Nipple*

By JOSEPH COLT BLOODGOOD, M.D., F.A.C.S., Baltimore, Md.

ALTHOUGH we do not know the exact cause of cancer and, as yet, we have not found a specific preventive or cure, we do know, from observations on man and animals, that chronic irritation, over relatively long periods of time, will produce cancer.

The chimney-sweep in England developed cancer of the scrotum. This is a part of the body not exposed to sunlight, but a part difficult to keep clean, especially in those days of low wages and almost the entire absence of provision for bathing. The dirt and the soot collected, and the irritation finally led to cancer. In the surgical books written around 1840 (about ninety years ago) one gets the impression that cancer of the scrotum was one of the most common forms of this, then hopeless, disease.

In my experience of thirty-six years, I have seen exactly two examples of cancer of the scrotum. Why has this form of cancer disappeared? Because it was an occupational cancer, and the occupation has disappeared. Should this occupation return to prominence, this cancer would be less prevalent, because wages are higher, people are able to take a bath, and more people able to take a bath *want* to take a bath.

Native races in Africa and other parts of the world keep in the mouth the betel nut, which is irritating. Most of their bodies are exposed continually to sunlight, but not sufficiently to produce a chronic burn. They do not get cancer of the skin, although they are not particularly cleanly, but many of them do get cancer of the mouth, and all who have it die of the disease. This form of cancer of the mouth is seen only in natives who have developed the habit of chewing the betel nut.

Another savage race living in a colder clime wears, in the winter, on the abdomen, a bag of hot coal, and in the burn

produced by this continuous heat, cancer develops.

We never see cancer in this part of the body in any civilized or uncivilized human being unless there is a definite burn which does not heal. Now, in the betel nut and in the burn from the charcoal there is no tar, and in the dirt on the scrotum filled with tar there is no burn, as there is when the hot coal is employed; but the betel nut and the hot coal on the abdomen and the dirt and tar on the scrotum are continually irritating the mucous membrane of the mouth or the skin, and cancer develops.

When more people used the kerosine lamp and there were more open fires, more children were burned. These burns were not properly treated, and the ulcers left by the burns remained unhealed, so these children, when they grew up, twenty or thirty years later, died of cancer.

Today we rarely see cancer in an old burn; first, because fewer children have burns; second, they are taken to a hospital when burned and are properly treated there, so that no opportunity for chronic irritation in an ulcer is left in which cancer may develop.

In the wars, up to 1870, they did not understand wound treatment, and many soldiers who survived their wounds died of cancer, years afterwards, because the wounds did not heal. Today, the wounds of soldiers are immediately healed and none run the risk of later cancer.

TOBACCO AND BAD TEETH

So far as I can learn, cancer of the mouth, as a common occurrence, was not described until long after the use and abuse of tobacco. Cancer of the scrotum, cancer in burns, cancer in old, unhealed wounds, have practically disappeared. When I made my first observations, from 1892 to 1900, I recorded one case of cancer of the scrotum, five cases of cancer in old wounds and perhaps twenty cases of cancer in old burns, and more than 100

*Prepared for the Delaware Cancer Committee, February, 1929.

cases of cancer of the lip, tongue and mouth. In 99 of those hundred cases the man or woman used tobacco in some form and had neglected, ragged, dirty teeth. There were but a few women and they used snuff by mouth.

I am confident that tobacco and ragged, dirty teeth had a larger number of cancer victims than were found among the chimney-sweeps, the betel nut chewers, the old burns, the old wounds, and irritation from the hot coal on the skin of the abdomen, not because the irritation of tobacco and bad teeth were more specific in the cause of cancer, but simply because more people used tobacco and neglected their teeth. My records since 1920 show that this form of cancer is now on the decline, because the majority of people in this country are learning the importance of keeping their teeth clean and going to a dentist for periodic examination and treatment, and are learning to stop smoking the moment they notice a sore spot or see a white patch within the mouth. As this knowledge of the relation of chronic irritation to cancer grows, I feel confident that my students, within fifteen or twenty years, will not see cancer of the mouth, but will only read about it, as I have read about the cancer in chimney sweeps.

ULTRAVIOLET RAYS AND RADIUM

In searching for some specific cause of cancer, experimenters finally produced that condition in animals by injecting or rubbing in irritants such as "scarlet R," irritating dyes and tar. Apparently tar and irritation will produce cancer in animals more quickly and more certainly than will any other irritation.

There has been considerable newspaper publicity about the possibility that excessive exposure to sunlight or to the artificial ultraviolet rays may produce cancer. We know that the x-rays will produce, on the skin of human beings or animals, an irritation, and that this irritation, on further exposure to x-rays or radium, will produce hypertrophy of the skin, warts, keratosis, or an ulcer; or, if the dose of x-rays or radium is very strong in the beginning, it may produce an ulcer from the beginning.

The result of chronic irritation, which means repeated and continuous exposures to x-rays and radium, ultimately leads to cancer, just as certainly as the tar and dirt on the scrotum, or the tar and "scarlet R"

experimentally employed on animals, or the tobacco and ragged, dirty teeth, or the betel nut in the mouth, or the unhealed ulcer after a burn, or the unhealed wound after any injury. The first men who used x-rays did not know of the danger until their hands and faces were covered with what we call keratoses and warts. All of these pioneers have ultimately developed cancer and most of them are dead. But cancer from x-ray or radium burns has disappeared just as completely as has cancer of the scrotum in the chimney-sweep, because we are no longer ignorant of the danger and we now know how to protect ourselves. Just repeat this sentence to yourselves: *None of us need longer be ignorant of the possible causes of cancer, and most of us can be protected from the majority of cancers by this correct information.*

I have seen but one case of cancer which, I could feel, was absolutely due to sunlight. This patient was a member of the Weather Bureau. In Florida, every day at twelve o'clock, he looked at the sun, with both hands exposed, ultimately developed, on the back of both hands, two burns, and in these burns two warts developed. He kept on exposing his hands until the warts became painful, and then he came under treatment, the warts were removed and the microscope demonstrated that cancer had developed, in the early curable stage. This patient is still at his occupation, there is no return of his trouble, but he is wearing gloves, just as the workers with x-rays are wearing gloves. This man is now protected from cancer.

The danger of cancer from an ordinary sunburn is a myth. The ordinary sunburn heals, and an exposure, after that, to the rays of the sun rarely burns. Fortunately, those foolish people who allow themselves to be burned to the stage of ulcer, during the bathing season, have an opportunity for complete healing during the winter period, so that, in spite of ignorance and neglect, winter comes on and heals them in spite of themselves. This is fortunate, because the sun's rays directly shining upon us produce in our bodies protective substances which help us fight the bacteria of disease and produce essential vitamins in the food we eat. For practical purposes and except in extraordinary instances, sunburn is never the cause of cancer.

IRRITATION AND DIRT

Cancer of the face and hands and neck (parts most exposed to sunlight) is common and, naturally, one might conclude that the sun was the cause of the cancer. But there are other irritants to which these parts are exposed—wind, rain and cold. There may be frost bites in the winter, as there is sunburn in the summer; but there seems to be one factor which is essential, and that is—dirt. If persons exposed to the weather and sunlight keep their faces clean, they are less apt to develop those areas of irritation of the skin which are identical with the conditions produced by x-rays—warts and keratoses. I am confident, from my studies and observations of more than thirty years, that cleanliness will protect and practically prevent cancer of the skin.

As men and women grow older and age thickens and wrinkles the skin, it needs more attention and, in addition to cleanliness with soap and water, there must be added some toilet water containing alcohol of at least seventy percent, and some application of an oily substance like vaseline, cold cream or cream and almond oil, because the skin loses its natural secretion of the sweat and sebaceous glands. Individuals exposed to dirt, sunlight and the weather, must be more careful of the exposed skin as they grow older.

Cancer of the face, hands and neck is due to ignorance of these facts, because we have absolute protection, as the roentgenologist does now, due to his knowledge of the x-ray burn. Statistical studies have clearly demonstrated that cancer of the mouth is more common in men whose occupation allows them to smoke all the time, than in another group whose work prohibits the use of tobacco, except during rest periods. The same is true of cancer of the skin. There are many men whose occupation is so filthy (for example, the miners) that they must energetically scrub with soap and water after the day's work. The incidence of cancer is much less in this group than in others whose dirt from occupation is less visible and who are not compelled to clean up after the day's work.

PAGET'S DISEASE

Let us take cancer of the nipple, first described by Paget, of England, more than seventy years ago. Through our knowledge of chronic irritation as the cause of

cancer of the mouth and skin, and through observations since Paget's time, we now know that cancer of the nipple in women is a preventable disease, and this form of cancer is disappearing, because women are getting the correct information.

All mothers know that an irritation of the nipple, when they are nursing a child, means, if neglected, an abscess of the breast. They have learned to keep the nipple clean and to protect it the moment it becomes sore. My records show that abscess of the breast has been reduced from more than twenty to less than two percent by education on cleanliness of the nipple.

Paget called attention to the fact that, in his form of cancer of the breast, there was a long period—one to three years—of neglected irritation of the nipple. In that period the majority of women had no opportunity to keep themselves especially clean. Today cleanliness is possible to everyone in this country. But there must be special cleanliness of the nipple, if there is any irritation, either while the child is nursing or later in life, and the woman must act at once. That cleanliness is identical with the additional care necessary for the dry and wrinkled skin of the old. Wash the nipple with soap and warm water, using cotton; wash with medicated alcohol; apply a little vaseline (not carbonated); cover with a piece of gauze, fixed to the skin with a piece of adhesive. If the irritation does not disappear within ten days, a physician should be consulted. This is the proper treatment for any irritation of the skin, no matter where situated.

Even the little corn or callosity on the foot should not be neglected, nor the wart or hangnail on the hand. The same vigilance should be maintained the moment a sore or a white patch appears in the mouth. It is essential today, if one wants full protection of the mouth, the skin and the nipple, to learn the necessity for cleanliness and the essential factor of special cleanliness and treatment of any spot in the mouth or on the skin that may appear, no matter what one's occupation is, or whether one uses tobacco or not. And, if this spot does not disappear within ten to fourteen days, it should be examined by a competent physician.

I feel convinced that, ultimately, cancer of the skin and mouth will disappear. It is simply a question of educating children in

the primary schools and keeping the entire population informed, in one way or another

CANCER NOW SEEN EARLIER

My figures show that, in cancer of both the skin and mouth, late and hopeless cancer has been reduced from more than fifty to less than ten percent. Early cancer has increased from less than three to more than sixty percent, and individuals are now coming under the observation of the medical profession before the irritated spot on the skin or in the mouth has become cancer in more than sixty-five percent, instead of less than three percent.

I rarely see Paget's cancer in the late stage. The majority of irritated nipples are cured without operation. In a certain percentage of cases, when this preliminary treatment fails, the nipple must be excised and a frozen section made and studied with the microscope. In a few of these cases early cancer will be found, and then it is necessary to remove the breast.

It has required many years to accumulate this knowledge in regard to the relation between chronic irritation and cancer, and, having acquired it, to give the people the benefit of it.

904 N. Charles St.

Notes from the American College of Physicians

Reported by GEORGE B. LAKE, M.D., Chicago

THE thirteenth clinical session of the American College of Physicians was held in the historic city of Boston, April 8 to 12, inclusive, and was, as usual, a profitable and pleasant occasion. The large number of excellent hospitals made available a wealth of instructive clinical material, and the three medical schools furnished competent clinicians to present it. Most of the papers read were valuable, but some were extremely technical and required much use of the projector to throw tables of statistics upon the screen, which grows a bit tiresome at times.

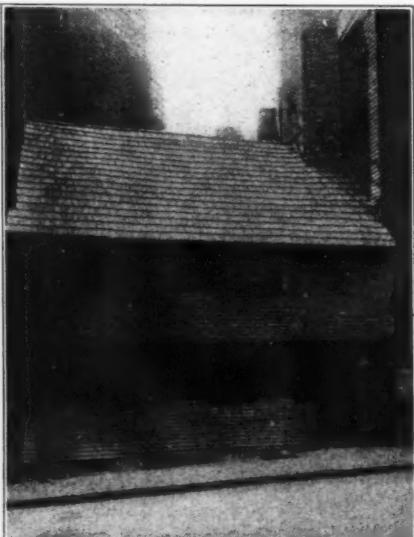
The commercial exhibit was small but well chosen and appeared to arouse much interest among the approximately 1000 physicians who were registered. Among

the exhibits a thermometer was shown for registering the temperature of the interior of a package of dressings passed through an autoclave. It is inclosed in a vacuum tube

so that it does not register for ten minutes after the high point is reached, so that if it shows the proper temperature, one knows that the dressings are sterile.

Another interesting showing was an apparatus for producing radiations said to be almost a duplication of the sun's rays and to deliver the full biologic range of ultra-violet. The source is a special tungsten filament in a soda-lime globe which filters out all of the short, destructive rays. With a screen for cutting off the visible rays, it makes an excellent diagnostic instrument, and it is small and convenient.

At the smoker, on Tuesday evening,



Paul Revere House



The Old North Church (Where the Lantern Was Hung for Paul Revere)

part of the famous Canti film, showing the activities of living microscopic plants and animals, was exhibited, and also another of the scientific pictures from the University Film Foundation, illustrating the nesting of the sea turtle, which comes on land only once a year, for the purpose of laying her eggs.

At one of the Clinics, a graphic illustration was given of the fact that even young diabetic patients must learn to take care of themselves. A girl of about ten years, dressed as a nurse, gave her doll an injection of insulin with good technic; while a boy of about the same age made a sugar test on several urine specimens and explained the results, and another weighed out his own diet properly and told how and why.

Boston is literally filled with points of interest and educational institutions, so that no one had any excuse for unprofitable minutes. One of the exhibitors took a considerable group of physicians on a highly interesting trip, by bus, to Gloucester, to see how high grade cod-liver oil is made.

Dr. John H. Musser, of New Orleans, assumed the chair as president, and Dr. Sydney R. Miller, of Baltimore, was chosen as president-elect. Next year's meeting will be held at Minneapolis, Minn., and Dr. S. Marx While will be in charge of the arrangements.

Here follow abstracts of some of the papers of greatest practical importance and some of the clinical discussions presented at the various hospitals.

FATIGUE AND INFECTION

By W. L. Holman, M.D., Toronto, Can.

Fatigue is a more important factor in



Faneuil Hall
(The Cradle of Liberty)

infection than most physicians imagine. It is not a local matter, but involves the entire organism.

Bacterial invasion of the body is common, but infection is relatively rare, because normal body cells resist the attacks of bacteria. If they succumb it indicates that cellular fatigue is present. The condition of the host is more important than the character of the invaders.

Long-continued breathing of dusty, dry or hot and moist air, as well as chilling of the skin, etc., fatigue the respiratory mucous membranes, so that their normal protective function is lost. General bodily fatigue reinforces this effect. Localized infections may cause allergy, which is a fatigue reaction.

Fatigue of the inhibitory mechanisms needs more careful study.

Heavy exercise, fatigue and heat interfere with the gastrointestinal secretions. External temperature, as well as diet, may be a factor in the etiology of diarrheal diseases. The symptoms of autotoxemia are those of capillary fatigue; and the prompt relief following defecation suggests a reflex mechanism, rather than toxic absorption. The first aim of treatment, in almost all diseases, is to permit the body cells to overcome fatigue, both general and local.

Malocclusion, with the resulting abnormal strains on the teeth and the tissues of the mouth and jaws, brings on local fatigue of these structures and is the chief cause of *pyorrhea*. If the malocclusion is corrected, the condition will clear up.

Mental and physical strains and stresses

and local irritations are prime factors in the causation of gastro-duodenal ulcers.

We are still under the spell of the early days of bacteriology, and spend most of our time and energy in looking for specifics. We would do better to give more study to the normal physiology of the body.

The fatigue of infection is generally due to insufficient, rather than to excessive activity. Exercise of all the functions of the body is the best protection against infection.

PSYCHIATRY IN RELATION TO MEDICINE
By Austen F. Riggs, Stockbridge, Mass.

Most functional disorders are of psychogenic origin. Colitis is generally a manifestation of emotional maladjustment, and many cardiac upsets are neuroses.

Neurotic patients go from one specialist to another, until they lose all faith in physicians and in science and turn to the quacks and cultists for relief. If more internists thought rationally about such matters, these unfortunates would promptly be directed to an able psychiatrist.

The patient who has no organic disease is not necessarily a neurotic; and, on the other hand, the neuroses are definite, clinical entities.

The psychiatrist can readily become the family advisor, like the best type of general practitioner, and can take a place not filled by any group or clinic which, collectively, cannot, and whose individual members rarely do, know the family and personal history.

More hospital beds, in this country, are now occupied by psychiatric patients than by any other class of cases; and more patients of this sort are suffering without hospitalization.

The closest possible cooperation is needed between the psychiatrist and the practitioner or internist, and this can be brought about only by teaching more psychiatry in our medical schools (one school now gives more time to mental diseases than is given to surgery) and by educating physicians, through the presentation of papers along this line at medical meetings, and by urging them to read the journals dealing with mental hygiene and therapeutics.

SYphilis of the Adrenals
By Alfred S. Warthin, M. D.,
Ann Arbor, Mich.

Socalled idiopathic Addison's disease is caused by syphilis in about 15 percent of

cases, and hypoadrenalinism is rather common, especially at the menopause, in women with latent syphilis. Under anti-venereal treatment, these patients show great improvement.

In women who, at the menopause, show low blood pressure, lumbar pain, anorexia, myasthenia and scattered areas of pigmentation, syphilis should be suspected.

PSYCHIATRY IN PREVENTIVE MEDICINE
By Arthur H. Ruggles, Providence, R. I.

Psychiatry has done little in the way of prophylaxis until very recently, but now that we know more about the treatment of neurosyphilis we have one means of prevention.

Since the War, "shell shock" has brought the psychoneuroses before the attention of the public and to physicians for treatment. It is not that mental disease is now markedly more common than formerly, but that more cases are now being treated, in hospitals and offices.

The psychiatric social worker is an important factor in prevention, as well as in treatment. Many mental patients can be handled in out-patient clinics and so adjusted to or stabilized in their environment that they need not be sent to a hospital for psychic cases.

Much good work is being done with "retarded" children, in the schools, where poorly adjusted personalities can frequently be straightened out and the patients saved from developing psychoses and psychoneuroses in later life.

We must remember that patients have emotions as well as tonsils; complexes as well as kidneys; and disturbances of behavior as well as of the gastrointestinal system.

Far too many nervous invalids are being created, because physicians forget that man has a mind as well as a body. Physical diseases are often present in those who are psychically unstable, but great care should be exercised not to tell them too much about their condition, lest their lives be made miserable by anxieties.

Many delirious patients die in general hospitals because the attendants do not know how to handle the mental condition. We need more teaching of psychiatry and more research into the etiology of the psychoses.

If potential psychotics can be relieved from physical and emotional stress and

strain, they can generally be saved from a complete break with their surroundings. An instance in point was that of a boy who was attending a large college where competition in many lines was very keen. His father had suffered from manic-depressive psychosis, and the boy brooded over this and appeared to be headed in the same direction. He was given complete rest for six months and then entered a smaller school in quieter surroundings, where he functioned comfortably and has remained well ever since.

THE MANAGEMENT OF DIABETICS (A Ward Clinic)

By Elliott P. Joslin, M.D., Boston, Mass.

Diabetic coma comes on slowly, after overeating and too little insulin: Insulin shock comes suddenly, after undereating and too much insulin. Adults in diabetic coma are given 20 units or more of insulin, every $\frac{1}{2}$ hour, until relieved; children 5 units. Remember that more insulin is needed during infections.

If a diabetic patient is seen early he can start with a high carbohydrate intake, and it can be kept high for years. Determine the amount of carbohydrate you think the patient should have for satisfactory nutrition, and give it to him, with enough insulin to burn it.

It is best to divide the insulin needed into three doses and give the largest dose before breakfast, a moderate dose before supper and a very small dose (1 to 5 units) between 10 and 12 o'clock at night. This night dose must be small, for fear of reactions, but every unit given at night is worth 4 or 5 administered the next day.

Every diabetic patient must have exercise or some equivalent such as massage, especially when confined to bed, in order to assist in burning sugar. When practicable it is well that patients take a brisk walk before breakfast, which will sometimes make them sugar-free.

One out of every three diabetic patients loses one or more toes or a foot, so we have a chiropodist on the staff of the hospital who comes once a week, examines the feet of all patients and teaches them how to care for their toes. A nurse continues the instruction and the foot toilet between times.

Nine out of ten diabetic patients develop arteriosclerosis of the legs within ten years. If gangrene develops on the upper side of

a toe, the bone can slough out easily and the toe can generally be saved. If the bottom of the toe is affected, it must come off. In removing a toe to save a foot or leg, make a lateral incision, so that downward drainage may be free and easy. Dress the wound with hyclorite, protecting the sound tissues with a coat of rubber cement and small strips of gauze impregnated with boric acid ointment.

All diabetic surgical patients are given ultraviolet irradiations regularly, for the general stimulating effect and to assist in preventing the appearance of bedsores and carbuncles.

The Buerger board (Fig. 1) is a help in keeping up the circulation, if used long enough. The leg is placed on the inclined section, as near vertical as is practicable, for 2 minutes; allowed to hang over the side of the bed for 3 minutes; and then

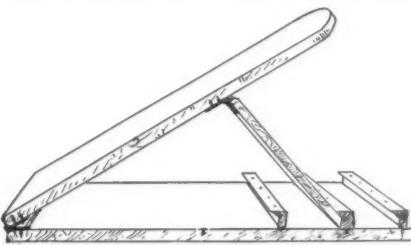


Fig. 1.—The Buerger Board

laid horizontal, with an electric hot pad over it, for 5 minutes. This 10-minute cycle is repeated six times (occupying one hour), morning, noon and night.

A patient whose urine is loaded with sugar (up to 9 percent) is a mild case and has not been exposed to a rigid diet. Keep his carbohydrate intake high and give just enough insulin to burn it. Always consider a case of diabetes as mild until it is proved to be severe.

HIGH BLOOD PRESSURE By Charles F. Martin, M.D., Montreal, Can.

The physiologic compensatory mechanism of the body is enormous and we do not know exactly what makes it break down in cases of hypertension. We know that pressor and depressor substances are present in various organs, but we do not yet understand their chemical nature.

Except in special cases, infections have little direct effect on high blood pressure; neither has alcohol, salt, fluids nor various other substances which have often been in-

criminated. In this connection, there is no difference between red and white meats. Obesity and hypertension often go together, but we do not know why.

The prognosis, in hypertension, depends upon the presence or absence of *nephritis*. It is good if there is no renal disease. The patient may go on for years with few or no disturbing symptoms.

The diastolic pressure is decidedly more important than the systolic, in estimating the degree of arteriosclerosis. If it is high, the prognosis is poor.

PAIN

By Emanuel Libman, M.D.,
New York, N. Y.

There are two types of human beings: The sensitives and the hyposensitives. The former respond to painful stimuli in the manner usually considered as typical; the latter give masked or aberrant reactions which are sometimes very confusing to the diagnostician, such as contralateral pain (on the side opposite to that affected—right-side pain in angina pectoris) or reversed radiation—from the periphery inward to the organ involved.

Hyposensitivity is congenital, and 90 percent of prize fighters possess this characteristic, while it is present in only 30 percent of the general population.

Sensitivity may be general or local, and of endogenic or exogenic origin. In some cases we understand its mechanism, and in others we do not. Sensitivity and radiated pain may be induced by the physician. This subject needs much more study.

In hyposensitive persons, various *substitution symptoms* may take the place of pain—feelings of cold, heat, burning or pressure; dyspnea, sweating, etc. One condition may cover another, or *general weakness* may appear as a substitute for local pain. Dizziness may take the place of nausea and vomiting or of pain. When the substitution is only partial, we have such paradoxical symptoms as a "dizzy pain," a "weak pain," and the like.

In studying such conditions as coronary disease, it is important to know in which of these two classes the patient belongs. A test may be made by placing the thumb firmly on the mastoid process, and then slipping it forward sharply under the ear, against the tip of the styloid process. The sensitive patient will wince or cry out with

pain; the hyposensitive will complain only of a feeling of pressure.

VASCULAR DISEASE IN DIABETES

By Reginald Fitz, M.D., Boston, Mass.

The family history is of great importance in diabetes, and every member of a family in which the disease has appeared (especially the children) should have the urine tested for sugar at least twice a year, that its presence may be detected early. Many persons have diabetes for years, without symptoms, and sugar is accidentally found in the urine at some routine examination.

Any patient with an infected foot which does not respond promptly to treatment, and all showing any signs or symptoms of vascular disease should be suspected of having diabetes and the blood and urine subjected to examination for the presence and amount of sugar. In practically all elderly diabetic patients, most of the arteries appear, on a roentgenogram, as hard, calcified cords.

In diabetes with coronary disease, do not reduce the sugar too rapidly, as a sudden lowering of this substance may precipitate an attack of angina or of infarction.

If a patient has both cardiac disease and diabetes, he should be treated primarily as a *heart case*, and the diabetes attended to as a secondary matter.

Any infection arising in a diabetic patient increases the sugar in the urine. He must at once go to bed, drink a great deal of water and take a dose of insulin, in order to minimize the danger of coma.

In many cases the physician can prevent diabetes, if he can prevent the *obesity* which so commonly precedes it. It is of the highest importance to keep the members of diabetic families thin.

With insulin, the treatment of diabetes is vastly simplified, and the vascular complications, involving the blood vessels of the brain, the heart and the extremities, are now our most pressing problem.

Every diabetic patient (even a child) must learn to test his own urine, weigh out his own diet, and give himself injections of insulin.

PAROXYSMAL TACHYCARDIA

By Samuel A. Levine, M.D., Boston, Mass.

It is entirely possible to diagnose paroxysmal tachycardia without an electrocardiograph or any other instrument except a sphygmomanometer and a stethoscope.

The attack comes on abruptly and without warning, frequently in a person who has no signs of heart disease. The patient is cold, clammy and collapsed and it is often difficult to obtain the blood pressure. The systolic pressure falls and the diastolic rises, so that there is almost *no pulse pressure* (94/88), and the peripheral blood therefore stagnates.

The pulse rate is extremely rapid, fixed and *very regular*, so that it can be accurately counted up to 250 beats per minute. This rate, whatever it be, is *not affected by motion*, or other disturbance, as is the rate of the normal heart, and will be maintained continuously for minutes or hours. If it varies, the condition is not paroxysmal tachycardia.

The attack stops as suddenly as it began (between heartbeats) and generally leaves no ill after effects, so that the condition, while extremely distressing, is rarely dangerous.

Treatment of the Attacks.—Many cases are so short that they require no treatment. Sometimes the holding of a deep breath as long as possible will give relief. Pressure upon the vagus nerve, or painful pressure on the eyeball helps others. In *refractory* cases, *quinidine* may be given intravenously, but this is heroic treatment and should be administered only by one who is thoroughly familiar with the drug.

If the attacks are rare or of very short duration, it is unnecessary to give medicines for prophylaxis. If, however, they are frequent and severe, so as to interfere seriously with the patient's life, they may often be prevented by keeping him constantly digitalized (though digitalis is useless in treating an attack) or quinidinized. In giving the latter drug, begin with 5 grains (325 mgm.) every 3 hours, by mouth, and gradually increase the dose to the point where relief is obtained, which may require as much as 22 grains (1.5 Gm.).

PERNICIOUS ANEMIA

(A Clinical Lecture)

By William B. Castle, M.D., Boston, Mass.

The prognosis in cases of pernicious anemia is now rather bright, provided treatment is started early, in suitable patients.

If pernicious anemia is a deficiency disease (as some now believe), there should be *intermediate* cases, showing some, but not all, symptoms of the disorder and

amenable to treatment with liver or liver extract. A patient showing gastrointestinal and nervous symptoms, but with a *low* color index of the blood, obviously had not *typical* pernicious anemia, but responded well to daily feedings of $\frac{3}{4}$ pound of slightly broiled kidneys.

Pregnancy may cause the first appearance of signs and symptoms of pernicious anemia, and in such cases the administration of liver extract may be used as a diagnostic procedure. If, upon such treatment, the reticulocytes increase first and the red blood cells promptly thereafter, the diagnosis is confirmed. The disease may also be present in conjunction with cancer.

If the neurologic features of pernicious anemia are prominent, the prognosis is not so favorable, but if the physician remains hopeful, he inspires hope in the patient, and, if liver feeding is continued for a long time, results are fairly certain, though slow and gradual.

Another patient showed 3,800,000 red blood cells and 90 percent hemoglobin, but was atactic and suffered from tingling in the hands and feet. She was relieved after months of feeding with $\frac{1}{2}$ pound of liver daily.

We must remember that, in the handling of pernicious anemia, we are treating something more than merely the blood picture; and that these patients must continue to use viscera or visceral extracts in the diet for the rest of their lives.

TREATMENT OF THE ANEMIAS

(A Clinical Lecture)

By George R. Minot, M.D., Boston, Mass.

Within the past four weeks, a liver fraction (a small nitrogenous base), has been obtained, so pure that it can safely be given intravenously in desperate cases.

Iron is very useful in certain anemias (especially chlorosis), if given in *large doses*—100 to 150 grains (6.5 to 10 Gm.) daily.

Anemias may arise from a slightly defective diet, continued over a long period, and may be relieved by correction of the dietary habits.

Pregnancy increases the degree of a chloro-anemia, and in such cases, best results follow the administration of liver, combined with *large doses* of iron, for long periods *after the patient appears to be normal*. This is done to assure the storing of a sufficient *reserve* of iron in the body.

It is also good practice, when liver extract is being administered, to give a little whole liver along with it. Some sort of activation of the extract seems to take place.

In cases of secondary anemia due to long-continued hemorrhage—as in bleeding hemorrhoids—large doses of iron often produce relief or cure.

Anemias due to infections, leukemia and certain other disorders can scarcely be helped by any remedies we now know. We need more careful, clinical studies of patients of these types.

THE NATURE OF DEFICIENCY DISEASE

By George R. Minot, M.D.,
Boston, Mass.

Disease may result from the presence in the body of something harmful, or from the absence of something necessary; and this deficiency need not be in vitamins, but may occur in any of the basic food substances, in minerals, in endocrine secretions, etc.

Deficiencies are much more common than is generally believed. Special diets, unless carefully watched, may easily prove defective in some necessary element, and even very slight defects, extending over long periods, may cause serious trouble. Much can be learned from a carefully taken dietary history.

Deficiencies are easily produced during the growing years. Fretful children, with spastic muscles, may lack vitamin B, and frequently improve after the administration of yeast.

Individual peculiarities result in varying requirements. A woman of 45 years had had obscure gastrointestinal symptoms for a considerable time and, at 42 or thereabouts, had an eruption on her hands. She said she ate enough, but inquiry revealed that she ate few vegetables and little meat (and that cooked excessively). On a daily diet of 225 Gm. of liver, 70 Gm. of bread and the juice of two oranges, she was soon well. It was a case of masked pellagra.

Even if sufficient food is eaten, the body may not utilize it. The patient with the achylia gastrica of pernicious anemia will get no good from 200 Gm. of beefsteak, unless it is first digested for one hour, *in vitro*. Achylia may be a factor in deficiency of vitamin B or the pellagra vitamin. Perhaps some deficiency plays a part in osteoarthritis.

Infections seem to increase the symptoms of deficiencies, so that, during their course, it is necessary to give more of the needed substance. Always give enough to produce the best effects *in the patient at hand*, and give it over a long enough time. It is not sufficient that health should be improved; it must be made as good as possible. Large doses of iron may, for instance, produce results, when small doses have failed completely.

We must remember that by no means all cases of deficiency disease present classical, textbook pictures. There are many degrees and varieties.

An adequate and balanced diet is essential to health, and the progress in laboratory research is constantly increasing the importance of careful clinical study of these patients.

THE PATHOLOGY OF DEFICIENCIES

By S. Burt Wolbach, M.D.,
Boston, Mass.

Deficiencies in vitamins cause changes more widespread than is generally recognized.

A lack of vitamin A affects, not only the epithelial structures of the cornea (xerophthalmia), but all of the epithelial structures in the body (bronchi, intestines, kidneys, etc.), causing changes in the cells and the exfoliation of horny material, which fills up the lumen of tubular organs and leads to severe and varied symptoms.

In the same way, a lack of vitamin C does not stop with causing the bone lesions commonly recognized in scurvy, but affects all of the connective tissue structures in the body, leading to fibrous or hyaline degenerations. A fractured bone, in a person suffering from scorbutus (lack of vitamin C), will never heal.

In both these instances, feeding with the deficient vitamin will promptly restore the altered tissues to their normal state.

THE MILD AFFECTIVE DISEASES

By Lewellys F. Barker, M.D.,
Baltimore, Md.

Frank and severe cases of manic depressive psychosis ("circular insanity") are generally recognized rather promptly, but the milder disturbances of the emotional life (either depression, exaltation or mild or alternating types) are frequently overlooked.

Depression may be the most prominent feature of the case, with insomnia, forebodings, a feeling of inadequacy, guilt or uselessness, discouragement and the general sense that everything is a burden and that nothing matters. These patients view all life from a gloomy standpoint and declare that their sensations are worse than physical pain.

These patients frequently show minor somatic abnormalities (foci of infection, constipation, etc.), but the psychic disorders are of chief importance. A carefully-taken history generally reveals periods of depression in the past, often alternating with periods of more or less marked exaltation.

The phase of elation, which sometimes predominates, is the reverse of this. The patients show a free flow of talk, laugh frequently and easily, write many long letters, work tremendously hard and eagerly, without fatigue, and view all life through a rosy haze. They show a pressure of thought and activity, are frequently distractible, appear to lack the normal inhibitions, and have "slumps," or periods of more or less severe depression.

The two phases may alternate during the same day, giving the socalled mixed types. These patients are always hard to get along with.

While physical disorders should be corrected, so far as practicable, these cases generally run their course, and the chief treatment consists in giving the greatest possible relief during periods of depression.

TUBERCULOSIS: A CONFESSION OF FAITH
By Lawrason Brown, M.D., Saranac Lake,
N. Y.

It seems worth while, at times, to make a direct statement of our present position on a subject, so that we may observe progress and invite intelligent criticism. Here, then, are some of the things we now believe regarding tuberculosis.

1.—An appearance of ruddy health does not exclude the presence of tuberculosis.

2.—Long contact with a tuberculous patient frequently leads to infection, but a condition of lowered resistance is necessary for the development of clinical signs and symptoms of the disease. The hectic life now being led by many persons, especially young women, is an important factor here.

3.—Cases of fistula in ano, otitis media,

pleurisy with effusion, etc., which run a very chronic course should be suspected of being tuberculous.

4.—Symptoms are better guides to the condition of a tuberculous patient than are physical signs.

5.—Failure to examine sputum frequently for the presence of tubercle bacilli, in cases of chronic cough, is inexcusable.

6.—No one sign or symptom is pathognomonic of tuberculosis. Rales in the upper chest, following coughing, are second in importance only to the repeated demonstration of tubercle bacilli in the sputum.

7.—Persistence of physical signs in one locality is a highly suggestive finding.

8.—Anyone may contract tuberculosis. It is a grave mistake when a physician seems to feel that the members of his family and his intimates are, for some mysterious reason, immune.

9.—No study of suspected tuberculosis is complete without stereoscopic roentgenograms of the chest. These usually show more extensive involvement than is indicated by the physical signs, which latter give better information regarding non-tuberculous lesions.

10.—Serologic methods give little help in distinguishing between active and latent cases.

11.—The presence of two or more of the following five diagnostic criteria are practically conclusive evidence of the presence of tuberculosis:

- A.—Tubercle bacilli in the sputum.
- B.—Hemoptysis of one dram or more.
- C.—Chronic pleurisy with effusion.
- D.—Rales above the third rib after coughing.
- E.—Mottling in a well-taken x-ray film.

All of these signs must be absent in order to exclude tuberculosis.

12.—The value of treatment in tuberculosis varies as the *square* of the time it is continued.

13.—Few physicians are temperamentally suited for the care of an essentially chronic disease like tuberculosis.

14.—Tuberculous patients can and do recover anywhere and everywhere, if properly treated. Only about five percent of them require a change of climate; though any stimulating change in the mode of life is often beneficial, and the development of a "fresh air conscience" is a great help.

15.—The best place to treat a patient with tuberculosis is in a good sanatorium,

where he should remain for at least three months to arrest the disease, and two years for a cure.

16.—The diet should be sufficient, in quality and quantity, to maintain the optimal condition (8 to 10 pounds above the standard weight for height and age) *and no more*. It is a pity to waste good food, as some do.

17.—Rest, general and local (by thoracic surgery), is a valuable part of the treatment.

18.—Exercise is a potent remedy and, if unintelligently prescribed, may be deadly.

19.—Drugs are helpful in treating many cases of tuberculosis, but there is, as yet, no specific for the disease—either drug, serum or vaccine.

Iconoclastic Chemotherapy (A Preliminary Note)

By F. LEBLANC, B.L., M.D., Elgin, Ill.

IN A PAPER read before the Suffolk Branch of the British Medical Association, Dr. J. E. R. McDonagh, of London, used the following introduction: "Medicine is the outcome of magic, and still is pervaded by magic. The principle of magic, as Dewey succinctly puts it, is to achieve results without the intelligent control of means."

It is not my intention in this short paper to take magic out of medicine, but I shall feel well repaid for my efforts if I succeed in creating interest in the wonderful field of chemotherapy in the practice of medicine, as put forth by Dr. McDonagh in his work entitled, "The Nature of Disease."

It may be that those who had the privilege to meet and hear Dr. McDonagh at the Atlanta meeting of the Interstate Post-graduate Medical Assembly, in October, 1928, may have found the paper he read rather iconoclastic and difficult to follow, and I fully realize that, without the previous reading of his writings it would be practically impossible to grasp his thought.

I do not deny that one should be ready to bury quite a few idols of the past in order to comprehend and appreciate the subtle yet definitely scientific premises expounded by McDonagh.

Personally, I feel that no single paper can fully explain so many new theories and principles. The only motive I have in writing this paper is simply to call attention to the wonderful pioneer work of McDonagh, and to advise everyone interested in new ideas to look into that work with an unbiased mind and with a sincere purpose of adequate investigation.

What will appeal to any intelligent mind is the straightforward manner in which the author of "The Nature of Disease" attacks the subject and simplifies it. It's not the amount of drugs to use, nor the variety of bacteria to conquer, nor their classification and differentiation, but rather their exact mode of action and the electronic (not in the Abrams sense) activities of the blood proteins toward such bacteria, which he calls condensers.

McDonagh follows, in his diagnosis and treatment, a certain plan of blood chemistry, by ascertaining what the following findings denote:

- 1.—Sedimentation of the red blood cells.
- 2.—Blood urea.
- 3.—Blood sugar.
- 4.—Refractometric index of the serum.
- 5.—The ultramicroscopic picture of the serum.

This blood chemical study may seem, at first sight, to bear little importance in relation to health and disease, but if one considers the very small margin between the so-called normal and abnormal, and if one further stops to realize that, in a person of medium weight, say 150 pounds, the blood sugar, chlorides, calcium, urea, non-protein nitrogen, creatinin, cholesterol, etc., amount to a very small quantity, one is forced to the conclusion that such metabolites act qualitatively rather than quantitatively. As an instance, the blood sugar in such a person would amount to about one teaspoonful, or four grams; and still we hear of injecting 1000 cc. of a 10 percent solution, or twenty-five times the amount usually considered normal in the whole blood of such a person. The same

holds true for isotonic saline injections. It is, therefore, important to realize, by actual chemical blood tests, before and after treatment, what one has really accomplished and how the sugar or isotonic saline solution injected actually acts in influencing the blood chemistry.

It is by following these few items in every case, and by comparison, that one soon realizes that blood chemistry, as taught in textbooks, is far from enlightening in severe cases of shock or fatally progressing diseases. Many an example of socalled uremia with a low blood urea, and diabetic coma with a low blood sugar, have been lost without an intelligent understanding of what goes on in a normal or abnormal blood chemistry, as interpreted by the author of "The Nature of Disease."

The obvious objection to this plan of blood chemical study is the time and technical skill required for such routine analysis. I have found in my work that micromethods, exemplified by the LaMotte blood chemistry outfits, are sufficiently accurate for comparative data, which can be perfected by practice and experience. For the sedimentation of the red blood cells I make use of the B. Friedlaender tubes, sold by the G. A. Ingram Company, of Detroit. I also have a Spencer refractometer and a Hess viscosimeter.

As to the ultramicroscopic outfit, I find that the regular darkfield condenser and a 20 X ocular give an adequate field for proper diagnosis of the serum under examination. I have verified, by examining hundreds of specimens, that a very dependable and trustworthy method can be acquired with the above technic and instruments and be sufficiently precise for intelligent work and sound conclusions.

I will not go into the details of procuring the blood specimens nor the care of tubes and slides for this work, inasmuch as such details are fully covered in McDonagh's book.

It is remarkable indeed to follow, with this technic, the action of several drugs on the blood in different diseases. The drugs recommended and proven in such cases are few in number but very potent, if used according to the blood status. They are classified according to their respective action of conduction, dehydration and hydration. To undertake to explain such terms in a brief introductory paper is well nigh impossible.

Osler once said that to know syphilis is to know medicine. This is more than verified by McDonagh, for he goes so far as to maintain that there is but one disease, although several names are appended to it, according to the objective and subjective clinical pictures revealed by its respective symptoms.

Any one having had experience with McDonagh's method soon realizes that, indeed, no matter what the disease has been named, the blood is very explicit in denoting unmistakable configurations showing the actual reserve or loss of electrons its plasma-protein particles have had to suffer at the hands of an invader, whether chemical, bacterial or physical. Even to the uninitiated, factors evolved from the blood chemistry soon become classified and lucid in his mind and proper treatment immediately suggests itself.

Dr. McDonagh has the happy faculty of simplifying his subject by giving records of many interesting cases showing the actual blood chemistry before, during and after treatment. The drugs he uses are analyzed and their chemical formulae shown to consist of an active group or groups, having a direct action in restoring or dissipating electronic activities.

It might be well at this time to review briefly what we may expect to see with the ultramicroscope—matters upon which McDonagh lays great stress in many reports. The limit of ultramicroscopic range of visibility is about 15 millimicrons. Therefore molecules and ions are much too small to be thus visible. The colloidal protein particles, which range between 1 and 100 millimicrons, are seen only through the light which they diffract and the rapidity of the socalled Brownian movement, which is the result of the electrons being charged bodies and moving about the atomic nuclei (or protons) in circular or elliptic orbits.

Chemical processes are proving more and more to be nothing but the acquiring or the losing of an electron. We are wont to call such a process reduction and oxidation, respectively, or as McDonagh prefers to call it, condensation and conduction.

The ultramicroscope remains the best indicator to show whether or not the blood is under the effect of a condenser or a conductor. Any physical, chemical or physiologic agent, capable, through its

condenser or conductor groups, of supplying or abstracting electrons from the blood protein particles, thereby causing their agglutination, clumping or precipitation, will at the same time cause disease and shock; whereas conduction, revealed by a well dispersed field of actively motile and normal sized protein particles, be-speaks health and recovery.

In other words, the chemicophysical changes which the protein particles in the plasma undergo will result in health or disease, irrespective of the causal factor or the name appended to such abnormal blood catastrophies.

I shall not attempt to demonstrate the action of the individual drugs and hormones on the blood proteins: neither shall

I, at this time, give reports of several interesting cases treated, both by myself and by several colleagues, in the last two years which I have devoted, at every opportunity, to the study of this work.

I do want, however, the help and discussion, as well as the constructive criticism, of several interested men who will carry out the work in the laboratory along the lines I have suggested. Anyone who will take the time to follow such a procedure will, in a short time, be in a position to discuss and suggest an intelligent and direct method of handling cases which, heretofore, have been dealt with according to the everlasting and antique principles of magic.

Spurling Bldg.

Tumors of the Kidney

(The Value of the Pyelogram in Early Diagnosis)

By WINFIELD SCOTT PUGH, M.D., New York City

ONE of the most difficult problems with which the physician has to cope is that of the early recognition of tumors of the kidney. Prior to the advent of the cystoscope and the x-rays, they were usually missed.

Renal growths, in both adults and children, have long been known, as they appear among the early historical documents. It was not, however, until 1855, that Robin first described a new growth as arising from the epithelium of the renal tubules. His description was apparently accepted by Klebs, Waldeyer, Recklinghausen and others prominent in the pathologic world of that day. These students then classified renal tumors as benign adenomas and infiltrating carcinomas.

It was Catanni who, in 1870, began to recognize the occurrence of the so-called sarcomatous elements; Grawitz, in 1883, detected the fatty, yellowish cortical tumors, which later (1892) were named *hypernephroma* by Birch-Hirschfeld. These were the so-called embryonal rests. In 1899, Wihlms referred to a group of kidney tumors of embryonic origin which he called *mischegewulst*. Since then, but little has been added to our knowledge of kidney growths.

CLASSIFICATION

The following table represents a simple grouping of these masses:

- 1.—Primary neoplasms of the parenchyma.
 - A.—Epithelial type.
 - (1).—Adenoma.
 - (2).—Carcinoma.
 - B.—Connective tissue type.
 - (1).—Benign: Fibroma, myxoma, chondroma, leio- and rhabdomyoma, angioma.
 - (2).—Malignant: Sarcoma.
 - (3).—Embryonal: Adeno-myosarcoma; also called teratoma or mixed cell tumor.
 - C.—Neoplasms due to misplaced adrenal rests—hypernephroma.
- 2.—Primary neoplasms of the renal pelvis.
 - A.—Epithelial type.
 - (1).—Papilloma.
 - (2).—Papillary carcinoma.
 - (3).—Epithelioma, squamous cell.

SYMPTOMS

As this paper is intended as an aid in the early diagnosis and treatment of renal tumors, I shall endeavor to confine myself as much as possible within these limits.

*From the Urological Department of City Hospital, New York.

Malignant disease of the kidney does not differ essentially from malignant disease elsewhere in the body. Upon its early recognition depends the percentage of cures. It is only too frequent, however, that our patients are seen in the late stages, when practically all hope has vanished.

Part of the blame undoubtedly rests on the shoulders of the family physician, in not advocating a complete urologic examination. Only recently have I seen a patient treated for half a year with calcium lactate and ergot, to check a hematuria.

How long has the patient had symptoms? Unfortunately, this means nothing and gives us no clue to an early diagnosis. According to various observers, symptoms have existed from a few weeks to as long as twenty years. The late Samuel Lloyd told me of a case in which a woman had carried a mass in her side for twenty-one years. When it was finally opened, there was a very large kidney, showing a pyonephrosis and carcinoma. I have recently done a nephrectomy in which, according to the patient's statement, symptoms were present only about three weeks.

The cardinal symptoms of renal tumors are usually given as *hematuria*, *pain* and *tumor formation*.

Hematuria is, in my opinion, the symptom of greatest importance. As a rule it is the first thing to attract a patient's attention and is present, in my experience, in at least 75 percent of the cases. At time it is, for long periods, the only symptom.

Bloody urine is a danger signal and requires immediate investigation. Unfortunately, only too often, the bleeding is intermittent and the patient is lulled into a false sense of security until it returns. Hemorrhagic attacks may cease and the urine be clear again, perhaps for months. When the hemorrhage recurs the clots may be sufficiently large to cause acute retention. In the intervals between attacks there is no cessation of activity in the new growth, cell proliferation going merrily on.

Attempts have been made to distinguish between renal blood and that from the lower urinary tract. This is a waste of valuable time and gets us nowhere. The presence of blood in the urine should always cause us to think of malignant disease. If we make a mistake, in this direction, the error is a pardonable one.

Pain is the second symptom of importance. There is nothing definite about this. By this I mean that its location varies as, for instance, over the lumbar area, back, loin or abdomen. In addition to this there is nothing distinctive, as apposited to pain of other renal disease. Pain is definitely present in at least 75 percent of the cases. It is not possible to make a diagnosis of renal tumor on pain alone. Even, however, were there no other examination of the patient, in many cases mere pressure over the renal area elicits pain. Fist percussion often causes as much pain as in pyelitis. In a small percentage of cases, attacks of renal colic occur, usually as an accompaniment of hematuria. This has appeared in about five percent of our cases.

Tumor formation is present in about one-third of our cases. It quite definitely establishes a diagnosis. A palpable mass is, however, often the first inkling of the disease in children. When the tumor mass is large enough to be palpable, thrombosis of the renal vein is often present. Metastasis quickly follows. It is safe to say that at least 25 percent of the cases in which a mass was palpable showed microscopic evidence of renal vein involvement. The following case is a typical example:

ILLUSTRATIVE CASE

History: White male; age, 41. Chief complaint: Pain over the left lumbar area, extending down toward the hip and also in the direction of the symphysis pubis. This condition was first noticed about three months ago and has gradually increased in intensity. He has been to various doctors and has even had roentgenograms made, which were said to be negative. Last week he noticed that his urine was red and he thought he saw blood on one occasion after coughing in his handkerchief.

On palpating the abdomen, a large mass was easily defined in the left area. It was somewhat reniform, extending from the anterior to the posterior axillary line, above and beneath the ribs; below, well into the pelvis.

Cystoscopically, the bladder was normal. No blood was seen. The kidney urine from the right side was normal; on the left there was practically no function. A pyelogram showed an extensive filling defect in the upper part of the kidney area.

The roentgenograms of chest, and thighs were negative. The internists reported a slight anemia, but no apparent involvement of the chest or other organs by the new formation. Operation was advised.

Operation: The kidney was exposed through a transverse incision. While very large it retained a fairly normal contour. On palpating the pedicle it did not seem greatly thickened. Several decidedly enlarged glands were found

near the vena cava. The organ was removed and showed an unmistakable carcinoma, projecting well into the pelvis. Thrombosis was present in the renal vein, extending into the vena cava.

This man made a fairly good postoperative recovery. He was dead, however, in three weeks after his discharge from the hospital. Metastasis to the lungs and other organs was evident. Autopsy showed marked thrombosis of the vena cava, with embolic masses blocking both pulmonary arteries.

The chief point I wish to make here is that, while the socalled cardinal symptoms may suffice to make a diagnosis, it is often too late in the disease.

GENERAL SYMPTOMS

It must not be forgotten that patients sometimes come to us with lumbago, back-ache, etc. Malaise, pallor, dyspnea, etc., are sometimes the only outward signs of disease. A careful examination will usually recall a urinary symptom or a group of them that the patient has failed to tell us about. Are there not, however, other signs or symptoms accompanying renal tumors that should call our attention to the urinary tract? Most certainly there are. In analyzing the records of 100 consecutive cases, in four large hospitals, we find the following, occurring quite early:

- 1.—Dribbling
- 2.—Dysuria
- 3.—Frequency
- 4.—Headache
- 5.—Incontinence
- 6.—Nausea
- 7.—Renal colic
- 8.—Scanty urine
- 9.—Tenesmus
- 10.—Urgency.

As a rule, two or more of these symptoms are present very early in practically all surgical diseases of the kidney. They serve to focus our attention on the urinary tract and cry out loudly that the patient requires a complete urologic examination. Failure to heed this warning is only too often fatal. By a complete urologic examination I mean cystoscopy, ureteral catheterization, functional kidney tests, blood chemistry, pyelography, etc.

Cystoscopy alone often gives us valuable information, such as ureteral bleeding, clots, swelling or edema of the ureteral orifice and implants. A valuable aid has been suggested by Hyman, in the use of the wax bougie. This enables us to distinguish between the bleeding from a cal-

cus, which does not show on the x-ray film, and a tumor.

It has been said that functional tests, made after placing the catheter tip in the renal pelvis, are of little value, as reduced function occurs in other diseases. This criticism is a little overdrawn, as reduced function at least suggests a diseased kidney and we certainly have one when a neoplasm is present.

PYELOGRAPHY

The important feature in diagnostic technic is the pyelogram. The uninjected kidney photograph is not always satisfactory. A good film should show the presence or absence of a kidney shadow on each side; the size, shape and contour of each kidney; and the presence of abnormal densities in each renal area. Hickey believes malignant disease of the kidney may often be suspected from a flat plate, if there is an unusually large kidney shadow, seemingly out of proportion with its fellow. This, in my opinion, is not satisfactory. However, preliminary films may show processes of bone degeneration which are very suggestive of metastasis.

Pyelography affords us definite knowledge that there is something radically wrong in the kidney; but it would be a great error to say that we can always make a diagnosis by the pyelogram. There is no such thing as a typical picture of that kind, although such claims have been made. Renal neoplasms are often bizarre, and this means that pyelograms will vary. I shall not discuss the normal kidney pelvis, as it is fairly well understood. There are certain changes produced in it by tumors, which, while not positively diagnostic, are certainly suggestive. These are:

- 1.—Elongation of the calices
- 2.—Filling defects in the pelvis
- 3.—Enlargement of the pelvis
- 4.—Displacement of the kidney.

As a rule, elongation of the calices, giving one or more streaklike appearances will be seen early. The elongation varies greatly with the size of the growth. When the tumor begins to invade the pelvis, filling defects begin to make their appearance, so that this condition occurs very early in tumors of the pelvis, and later with those in the parenchyma. In some cases the pelvis seems entirely obliterated. If sloughing occurs in the growth, the pelvis may seem to be enlarged, or it may

assume a moth-eaten appearance, somewhat like that seen in renal tuberculosis.

Some of these pictures may be produced by extra-renal growths. Practically every point I have brought out may be produced by the presence of conditions other than kidney growth, but it is reasonably safe to assume that they are in the kidney most of the time.

When the suggestion of a kidney tumor arises, but the diagnosis is not clear, we are justified in doing an exploratory nephrotomy. In these modern days, when our associates do not hesitate to do an exploratory laparotomy, thoracotomy or craniotomy, why should we hesitate to do a kidney exploration?

REPORT OF CASES

Mrs. B., white, age 47; complains of urinary frequency and, at times, urgency, with left lumbar pain.

Family and previous personal history: Negative.

Present illness: Patient dates the beginning of her illness back about two months, when she tripped and fell, her back striking on a table. Since that time she has noticed increased frequency of urination, particularly at night. Within the last two weeks urgency has been rather pronounced. Does not think she has passed blood, but her urine has been very dark.

Physical examination: Essentially negative. No tumor mass palpable. Some tenderness over left abdomen.

Cystoscopic examination: Bladder is apparently normal. Right ureteral orifice seems normal; from the left a clot can be seen projecting. Both ureters were catheterized, obtaining clear urine on the right and a small amount of blood on the left. Very low function on left side.

Roentgen examination: Left kidney is definitely enlarged and low in position.

Pyelogram: Shows that the kidney is low, with a distinct loop in the ureter. The kidney shadow is small, with a marked filling defect in its upper portion and a somewhat dilated pelvis. This pelvis suggests a cup.

Operation revealed a tumor occupying the upper two thirds of the kidney. The entire mass was about one-third larger than the normal kidney. The growth appears to sit in the remaining portion of the kidney tissue as an egg in a cup. Type of tumor: adeno-carcinoma.

Case II. **Mrs. G. L.**, age 56; complains of pain in the back and burning on urination.

Family history: uneventful.

Previous personal history: Said to have passed a kidney stone about three or four years ago; otherwise generally healthy.

Present complaint: About a year ago she began to have pain in the left lumbar region, at times radiating down to the bladder. Recently this pain has become fixed in the lumbar area. Thinks it is increased when she bends over, and on resuming the erect position it will disappear. At times in the past year she has noticed a burning on urination; recently

this has become pronounced and is now almost constant. No hematuria.

Physical examination: aside from tenderness over the left kidney, is apparently negative.

Cystoscopy: Instrument passes readily; no pain. The bladder seems generally normal, including the right ureteral orifice. The opening of the ureter on the left side seems very small. It, however, takes a No. 6F catheter, which is passed to both kidney pelvis. Very low function on left side; many red and white blood cells. Right kidney, urine normal.

The plain x-ray plates were unsatisfactory, but a pyelogram of the left kidney shows a spider-like effect, with much thinning and moderate elongation of the calices. (See Fig. 1).



Fig. 1

There was considerable difference of opinion regarding this pyelogram. An operation was finally decided upon and a moderate-sized hydronephroma was found.

Case III: **A. G.**, white, age 60. Chief complaint, bloody urine.

Previous family and personal history: rather vague.

Present illness: This he believes began about one year previous to entering the hospital, at which time there was a painless attack of hematuria. Since then he has had several similar attacks. In the last few weeks he has noticed stringy clots hanging to the meatus after urination, and states that he has also had slight pain over the right lumbar region. Inquiry as to urgency or frequency leaves the patient in doubt.

Cystoscopy: Instrument passed without difficulty. Bladder and ureter orifices appear normal. Ureteral catheters passed to both renal pelvis without difficulty. The urine on the left appears normal and phthalein appears in about three minutes. On the right side we are unable to obtain any fluid, and no dye after twenty minutes.



Fig. 2.

The radiographic examination shows a normal-sized kidney, with no stones in the urinary tract.

When making the pyelogram, it seemed to us that most of the fluid seemed to return quickly to the bladder. The picture (Fig. 2) shows a marked filling defect, obliteration of all the calices and some dilatation of the upper ureter.

Operation was recommended and accepted. On inspection, the kidney appeared normal in size but very nodular and dense. Nephrectomy was performed. The pathologic report was: papillary carcinoma of the renal pelvis.

Case IV: Mr. V., white, age 54, referred for pyelographic and radiographic study, on account of violent attacks of left renal colic. Present and past history is uneventful.

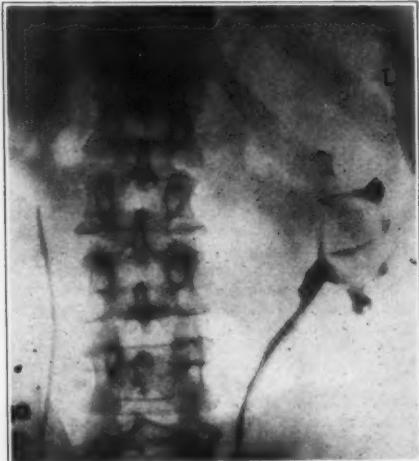


Fig. 3.

Present illness: The patient thinks that, about eighteen months before coming to us, he first noticed a marked attack of pain in the left upper abdominal quadrant. This lasted for a couple of days and was relieved only by opiates. His condition was diagnosed, at that time, as renal calculus. About one month later another attack occurred. This was associated with great frequency of urination and some hematuria. Since that attack, there have been several attacks, varying in severity and becoming more frequent. Urgency and frequency are now quite constant. Has not noticed blood for some time.

Cystoscopy reveals a practically normal bladder and ureteral orifices. Catheters pass readily to both renal pelvis. On the right we have normal urine and a normal renal function; on the left we have blood, pus, and a trace of phthalein in ten minutes. The roentgenogram shows a mass of considerable size, occupying the left renal area. The pyelogram beautifully showed filling defects, elongation and clubbing of the calices. (See Fig. 3). This picture strongly suggested that we had to do with a tumor involving the upper two thirds of the kidney.

Operation was advised and accepted. A tumor of considerable size was found and the kidney was removed. Pathologic diagnosis: hypernephroma.

Case V: J. G., white, age 51 married, native of Austria.

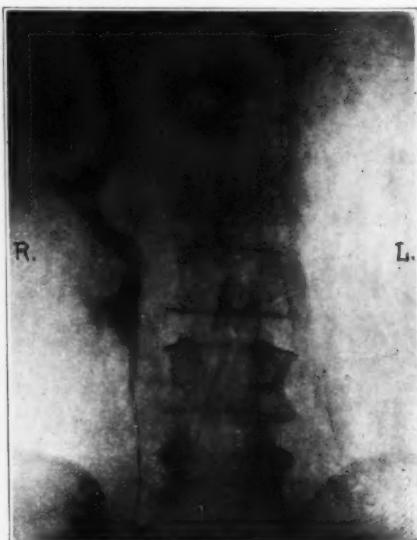


Fig. 4.

Chief complaint: Pain in back and down the right leg.

Previous personal history: Has been generally well. Had gonorrhea about twenty years ago.

Present Illness: At first the patient stated that he had been annoyed only for a couple of weeks. Careful interrogation reveals that, for more than a year, he has been tortured with increasing urinary frequency, day and night. At present it is almost hourly. At times the desire is urgent. He never has noticed blood, but

thinks that many times the urine has been quite dark.

Examination by a competent internist is apparently negative as to heart and lungs. Abdominal examination is negative, except that fist percussion elicits pain over the right kidney.

Cystoscopy shows the bladder normal but containing a few clots. Ureters readily catheterized; the left shows clear urine, cultures sterile, phthalein normal. Right shows very low function, many red blood cells and considerable pus.

Pyelogram (Fig 4) shows a marked rather irregular appearance; filling defect is pronounced. Operation showed a large mass which seemed to replace the entire kidney. Nephrectomy was performed.

CONCLUSIONS

1.—Kidney tumors are practically all malignant.

2.—The appearance of the so-called three cardinal symptoms usually means we are too late to help the patient.

3.—Urinary symptoms, such as urgency, frequency and dysuria, are usually the forerunners of the cardinal symptoms.

4.—In these cases, and certainly with hematuria, there must be a complete urologic examination.

5.—Never delay an examination in the presence of hematuria. It is always a sign of great danger.

6.—No examination is complete without a pyelogram, which usually clinches the diagnosis.

7.—If there is still any doubt after the pyelogram, do an exploratory nephrotomy.

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30 East 40th St.

The Therapeutic Value of Equanimity

How to Acquire This Position of Advantage as a Habit
or Fine Art in Convalescence

By J. MADISON TAYLOR, M.A., M.D., Philadelphia, Pa.

THE late Sir William Osler entitled one of his most delightful essays "Equanimitas." He treated the topic as one of ethics. It is much more, being the chief agency in preventing and in recovering from, most protracted disabilities and diseases. While being the distinguishing characteristic of religions, it is also the mainstay of therapeutics. In Greece there were the stoics, and in our land the primitive red men who made imperturbability the rule of life. The power of conscious, purposive self-control, under all circumstances, is one of the finest of the fine arts, as well as of the healing arts.

My professional experiences have taught me that an acquired state of poise, tranquility or serenity is paramount in reestablishing health. The main question is how to

achieve, readily, completely and permanently, a mobile equilibrium.

Nearly every one living under the complex influences and exasperations of a crowded civilization is subjected to multitudinous stimulations which produce a state of strained attention and of excess tension in body. Also, the disposition changes to one of irritability. The effect is a "twitter" of motion and emotion. The nerves, thereupon, leak energy, like badly insulated electric wires. The results are varied forms of over-stress, strain, asthenia, and vulnerabilities. Any weakening among the line of structures tends to impair balance between them and the controlling energies. One yielding becomes piled upon another until the organism is ready to give way in many places. No human machine could then re-

main sound nor keep its power of self-defense or self-adjustment. Under such conditions one becomes an easy prey to any germ or faulty chemical process. The same condition arises in the strongest metals..

Since few escape the perils of weak spots in their organisms and the accumulations of minor shocks, most people acquire susceptibilities and defective habits of self-control.

Thus the life powers tend to ooze away and various vulnerabilities arise. Then any new assault may happen and tumble the organism over. The whole postural tone is let down and one becomes a ready prey to diseases of structure and of mind. The spirit also becomes so hampered, so over-weighted, that it gives way. At least it is unable to stem the tide of hurtful influences.

I submit a device for diverting these strains and establishing habits of poise and receptivity to reconstructive suggestion. This measure I use habitually when a complicated situation presents itself, needing relief from almost any sort of protracted disability. It affords an incomparable ground or soil for repair measures to fructify.

THE TECHNIC OF RELAXATION

I address myself to the reader as to a patient. The whole procedure occupies about ten minutes. He can later do this himself.

Lie on your back or recline in an easy chair, preferably with the feet up. Get into a perfectly comfortable attitude. Give close attention to my explanations and requests. Be prepared to agree with me in all things, reserving objections until later. Cooperate constructively. It is my aim to secure your undivided attention and to regain the same conscious control of your muscles in repose, in the negative phase of movement, as when you are in the active stage.

Doubtless you are proficient in most free, active movements. You can, through will power, move and control any of your limbs or your neck or back, with exactness. This is only half of your repertoire of motor capabilities. You can and should now shut off all power from your kinetic (performing) mechanisms and permit me to lift a limb, move it about, turn and even drop it, or push the head to one side or the other, unhindered. You must submit to this and make no movement or resistance, either to help or to hinder me. In short, get into the essential condition for sleeping—an entire surrender of all impulse to move. At the same time, keep your mind awake. Merely cooperate. We are working together for your own good and with your consent.

You have, roughly speaking, six major parts:

two arms, two legs, one neck, and one group of inner organs contained in the trunk—the chest, abdomen and pelvis. Each group will be taught its present duty in turn. By giving close attention to the task you will form habits of self-control. These are extremely useful in economizing energies.

I wish to distract a part of the attention you give me and fix it on the rhythm of breathing. All life is a series of rhythms: that is, movement at regular intervals. Hence I ask you now to breathe a little slower and a little deeper than is customary. This is to fix your attention on the semi-voluntary movements of the chest and diaphragm.

Breathe five times. Then I address one arm; I stroke it lengthwise and tell you this is your arm. You can use it as you will in active movements. Your present duty is to surrender and to welcome my suggestions. Let me do with the part as I choose. I now lift and move your arm about; turn, twist and bend; then lay it down. If you make any effort to help or hinder I can feel the tension.

Again breathe five times. Then I take the other arm, move it about and drop it.

Again do you breathe five times. Then I stroke one leg and treat it the same way. Again breathe five times. Then the other leg. Breathe five times.

Then I address the abdomen and chest muscles urging you to listen to the slight noises which are often heard in the intestines. This is not normal; there is some irregularity in peristalsis. This should be a silent process. Again do you breathe five times.

I now address your neck. Any one who is nervously overtense shows it by rigid, lifted shoulders and other features, betraying excess tension in those structures. Many headaches, eye and ear and other distresses are due, in large part, to bad motor habits—keeping constantly braced up, tense, ready for a jump.

Last I move your head to one side; then to the other; place it in different situations where it is expected to remain. Also I lift the head up and let it drop gently.

When the cycle is completed—it occupies about eight or ten minutes—I urge the patient to remain quite still and rehearse and apply my urgings to himself; if he repeat this procedure confidently he will, hereafter, retain the capability for complete rest—movelessness—in the negative phase.

This ceremonial can be done at any time and place. It should be repeated at least once a day—better three or four times—until the habit of reposefulness is formed. Every time it is done the energies surge back to the living engine and power is renewed in nearly full measure. Thus self-control grows as the rhythms come back to poise.

1504 Pine St.

The Country Doctor

By J. T. SCOTT, M.D., St. John, Kans.

MUCH has been written concerning the difficulties and disadvantages under which the country doctor labors, and practically nothing regarding his compensations, as though his life work is void of such an experience. This is perhaps, in a measure true, but it should be remembered that every honorable calling has its compensations.

To be listed among the hardships are irregular hours and meals, inclement weather, isolation, social ostracism, ingratitude, unjust criticism and a host of other seemingly insurmountable obstacles. All this is readily admitted, and yet, after an experience of almost a half-century, most of that time as a country doctor, I can positively state that rural practice has its compensations.

A VERSATILE MAN

The country doctor is, at once and continuously, thrown upon his own resources; he must do his thinking and acting unaided. There is no bedside record for him to inspect, no laboratory findings to give aid, even the temperature and pulse are to be ascertained during the visit, as well as a record of the case. All these call for the formulation of an immediate plan of action, which requires skill and special qualifications. If, as is usual, chemical, microscopic and laboratory tests are desirable, they must be made by the doctor and at the bedside, in so far as that is possible. Tests that call for chemicals and equipment not available at the bedside are made in the office without delay. This work may all be done for the doctor by laboratories under the direction of persons capable and fully equipped, which is the recourse of the city physician, but not so with the rural practitioner. This requires too much time and he does not feel justified in waiting one or more days for such findings as are needed immediately; therefore he must be, not only equipped to make all the simpler tests usually required, but must also be able to do them scientifically and draw therefrom correct conclusions. These so-called simpler tests include uranalysis, qualitative and quantitative sugar tests, blood smears and counts, diphtheria smears, sputum, pus, etc. Most of these can not be made satisfactorily

at the bedside and hence are made in the doctor's office.

This is but an introduction to the tasks imposed which require special technical skill, as well as time and limitless patience. It must be admitted that many practitioners, perhaps the majority, do not do or have these things done, but this does not alter the truth of the statement that neglect of any one of them is neglect of duty. It is axiomatic that the way to learn to do a thing is to do it, and, in the same sense that necessity is the mother of invention, so in this case is she the mother of versatility. If it is true that we learn best by doing, then it is not altogether a misfortune to be placed under circumstances and conditions that compel the doing; and perhaps for this very reason medical authorities and specialists of distinction are a unit in the recommendation to recent graduates to first engage in the field of general practice, preferably in an isolated community, before attempting special work in any line.

A DAY'S WORK

Let me here give in detail the daily experience of a country doctor in a village of 1,500 population. He makes, we will say, four calls; two in town and two eight or ten miles out in the country. Returning to his office, he brings two specimens of urine, a throat smear and an inoculated culture tube. He immediately makes the uranalyses and stains the smear; at the same time placing the inoculated tube in the incubator for twelve to twenty-four hours, or, as may be done, keeps it at room temperature until bed time and then places it in the pocket of his pajamas, where it will be kept near body temperature until he arises in the morning, when it can be examined for evidence of bacterial growth.

Now suppose that there is evidence of diphtheria, which is positively verified by a Gram-positive stain, his diagnosis is made and immediately the case is quarantined and the community thus notified and protected against further spread of the contagion. And even then, the conscientious physician does not stop, but recommends to the public the use of toxin-antitoxin.

In his examination of the specimens of

urine he discovers, in one case, a peculiar apple-like odor and acetone bodies, suggesting dietetic errors and incipient uremia, which he at once proceeds to correct. In the other specimen, upon using the diazo test, he gets the pathognomonic typhoid reaction. Immediately the diagnosis is positively made, the patient quarantined and an investigation instituted to determine, if possible, the source of the infection. Is it not evident that under such circumstances immediate action is demanded? Can the doctor afford to wait one to four days for a report from a distant laboratory? An entire community could be infected ere the truth were known, so he forestalls time by doing the work himself and at once.

This is not an unusual experience but one of daily occurrence in the routine of hundreds of country doctors. True, not all doctors are so alert and competent, but those that are derelict sooner or later are valued at their real worth.

SHORTAGE OF COUNTRY DOCTORS

There has been much discussion recently regarding the shortage of country doctors and, according to the views of some, they will ultimately disappear. Medical education requires years of preparation and great expense, all of which is necessary, especially the years of preparation, and the number of doctors graduated each year is growing smaller and smaller; but at the same time it should not be forgotten that there is not now need for so many doctors as in former days. Good roads, the automobile, the telephone and rural mail delivery are now almost everywhere and make it possible for a doctor to do ten times the work his father did, and do it ten times as easily.

To me there is no danger of a dearth of doctors; where there is need for one, there one will be found. My father was a country doctor and I have a vivid recollection of occasions when he would answer calls at a distance of ten to twelve miles on horse-back and in the winter time, when it would require twenty-four to thirty-six hours to make one call. Little did I think then that, in succeeding to his honorable calling, I would make trips of the same distance, in a closed and heated car, in an hour or less, and carry with me a miniature laboratory to aid in arriving at a correct and early diagnosis, as well as pharmaceuticals prepared by experts, in any desirable quantity or combination. He rolled his own

pills, made his tinctures, even carried ground mustard for making poultices.

Great changes have come, even in my lifetime, and among them is the change that has made it possible for one doctor to do the work that, a few years ago, required ten or twelve, and do it many times as easily.

In many of the smaller cities are clinical laboratories that make tests, from the simplest to the most complicated, but the up-to-date country doctor appeals to them only in cases that require expensive equipment and expert technic, such as Wassermann, blood-sugar and metabolism tests. These, however, are used in chronic conditions, in which the time element is not an important factor.

The country doctor is not passing, neither will he ever pass so long as there are country people who stand in need of a friend, helper and counsellor. He is a beloved member of every family circle, where he ministers to the sick, rejoices with them in their success and comforts them in their sorrows. He is richly recompensed in the love and faith they carry in their hearts for him.

THE NEW TYPE OF COUNTRY DOCTOR

The country doctor of today is not the country doctor of a half-century ago, any more than the city doctor of today is the city doctor of a half-century ago. The country doctor has advanced *pari passu* with his city cousin, and perhaps even more. His environment and experience have forced him to become self-reliant and resourceful. Every case is a puzzle to be solved, upon the correct solution of which rests his future reputation and peace of mind. Except he be well posted he will not succeed as a country doctor. His environment demands that he possess adequate knowledge of the fundamentals of the entire field of medicine and surgery; and in a sense that does not apply, necessarily, to the city doctor.

Why, then, do country people leave the family doctor and seek the advice and treatment of the city physician? Mainly because "familiarity breeds contempt," or perhaps better, "A prophet is not without honor save in his own country."

It should be instructive and interesting to give here, somewhat in detail, a minimum office equipment, such as is found in the offices of many country doctors. This would

consist of a microscope, staining reagents, incubator, laboratory glassware and chemicals, radiant light and heat, infrared, ultra-violet, low-tension and high-tension electric machines, with their applicators and electrodes, an x-ray apparatus, with a fluoroscope, dark room and all paraphernalia. And this constitutes what may be termed a minimum equipment, entailing an expense of from \$2,000 up.

This sounds formidable, and yet such equipment is to be found, practically complete, in many towns of less than 3,000 population. But the astounding thing about it is, not the number and expense of these modern aids to diagnosis, but the knowledge the country doctor must have properly to use and interpret them; for remember, he does it all himself, because competent aid is too far away to be available.

Is, then, the country doctor inferior in any way to the city doctor? Rather, is he not, in every sense save the ability to obtain outside aid, equal or superior to him? He must not only make his own x-ray films and be enough of a photographer to develop them, but must also interpret them and then, in fracture cases, administer an anesthetic and properly adjust them. There are no nurses nor internes to aid him—at the best only a neighbor or curious onlooker—no hospital conveniences, no ambulance save the one he improvises from his own "tin lizzie."

Does all this, which is a true picture, sound as if the country doctor was passing? He may be passing, but if so he is passing up and not out.

The best economic asset of any prosperous community is a well qualified and equipped physician. He treats disease and many times shortens its course and restores health; but greater than this, by far, is his ability to *forestall* and *prevent* disease. His daily purpose is to stamp out and destroy his only source of revenue; which is a characteristic peculiar to his profession. He has adopted the slogan: "Keep well rather than get well," which he strives to impress indelibly upon the minds of his patients, from sun to sun, and oft' through the dreary hours of night. He is well worth all he earns and much more than he collects, and it would be nothing short of a calamity if he should ever pass.

Many great men of medicine and surgery began as country doctors. A roll-call should prove interesting.

FAMOUS COUNTRY DOCTORS

John Hunter, the great English surgeon, came up to London, in 1748, a raw, uncouth Scotch lad, fonder of taverns and theatre galleries than of book-learning. He was taken in hand by his brother, the refined and accomplished William, and put at dissecting. Here he soon found himself, and, at a year's end, was teaching anatomy on his own account and practicing surgery under Cheselden and Pott. After some experience as staff surgeon with the expedition to Belle Isle, where he gained his unique knowledge of gunshot wounds, he settled down in London to a life of ardent original investigation, diversified by an extensive surgical practice and a commanding influence as a teacher.

Toward the end of the 18th century came one of the greatest triumphs in the history of medicine—the successful introduction of preventive inoculation by **Edward Jenner**, son of a Gloucestershire clergyman. It had long been a countryside tradition in Gloucestershire that dairy-maids who had contracted cow-pox through milking did not take smallpox. Jenner early conceived the idea of applying it on a grand scale in the prevention of the disease.

Robert Koch was educated in the gymnasium of his native town. After serving in the Franco-Prussian War, he became district physician, where he varied the monotony of long journeys over rough country roads by private microscopic studies. The year 1882 was marked by his discovery of the tubercle bacillus, by special culture and staining methods. In 1883, at the head of the German Cholera Commission, he visited Egypt and India, discovered the cholera vibrio, its transmission by drinking water, food and clothing, and incidentally found the microorganisms of Egyptian ophthalmia or infectious conjunctivitis.

In 1795, **Ephraim McDowell** settled in the village of Danville, Kentucky, then one of the outposts of civilization, and soon became known as a skillful and successful surgeon, especially in lithotomy, which he performed 22 times without losing a case. In December, 1809, he performed his first ovariotomy upon Mrs. Crawford, a woman of forty-seven, who lived to be seventy-eight. Ovariotomy had no existence in surgical practice before McDowell produced his results and put it upon a permanent basis.

Louis Pasteur was born at Dola, where his father was a local tanner. As a youth he was good at portrait sketching but was otherwise only a harmless, enthusiastic fisherman. Among many other things he is memorable for his discovery of preventive vaccination. Osler says that he was the most perfect man that ever entered the field of science.

Numberless other names deserve mention but time forbids. They are all well de-

scribed in that wonderful character—"A doctor of the old school."

Let me add, in conclusion, that I have had in mind the ideal country doctor, and for the laudable reason that those who fail to measure up to this ideal may, in the reading of this paper, be stimulated to strive to reach this standard, and thus become, what every doctor should be, a gentleman, a scholar and a helper of mankind.

Sodium Bicarbonate in the Urine

By CLIFFORD MITCHELL, M.D., Chicago

SODIUM bicarbonate is a useful drug, if properly administered according to indications, but an objection to its use is the tendency, on the part of certain patients, when once acquainted with it, to take it indiscriminately and without careful measuring. Moreover, we cannot always find out from ambulatory patients when or how often they take it. I have made use of urine analysis for many years, as a guide to the dietetic and medicinal habits of patients. Much can be learned from the evidence presented by the urine, without the patient's even suspecting the source of the doctor's information.

THE URINE OF BICARBONATE TAKERS

When a patient takes sodium bicarbonate in appreciable amount, the first thing about the urine that will attract the doctor's notice is the rise in specific gravity. A specimen of urine which naturally would show a specific gravity of 1015 will, when the patient takes soda freely, present one of 1020 to 1025. This is of importance in cases of chronic nephritis, where the specific gravity is, as we say, "fixed" at from 1005 to 1015, because a rise in the specific gravity, not due to an increase in the amount of albumin, may mislead the physician and perhaps unduly encourage him. "Soda urine" is readily recognized by a determination of urea, with the Doremus instrument. A low urea, with a high specific gravity, points to soda, except in cases of diabetes mellitus.

The reaction of the urine when the patient is taking soda is likely to be alkaline, provided he takes enough to overcome the natural acidity of his urine. When this

natural acidity has been overcome by sufficient soda, the urine will turn red litmus to blue, and methyl red to yellow, yet, at the same time, will not give off any odor of ammonia nor will any crystals of ammonio-magnesium phosphate be found in the sediment, by the use of the microscope. The addition of acid to such urine will cause foaming, the foam being white.

Readers of CLINICAL MEDICINE AND SURGERY will find, in the issue for March, 1928, an article of mine on the use of nickel sulphate as a test for alkaline carbonates in the urine.

THE NICKEL SULPHATE TEST

When the physician suspects the undue use of sodium bicarbonate in any case, the use of nickel sulphate as a urine test can be recommended. A test tube is filled to the height of an inch with a 20-percent solution of nickel sulphate and the suspected urine is floated on it, precisely as in floating urine on nitric acid in the test for albumin. All alkaline urines floated on nickel sulphate, will show, at the juncture of the urine with the nickel solution, a line, band, or zone of cloudiness, which varies in thickness and color with the amount of the alkaline carbonate present, provided, of course, that the urine is carefully floated on the nickel solution. When a large amount of sodium bicarbonate is present in the urine, a distinctly white, broad band of precipitated carbonate is to be seen at the juncture.

Quantitative determination of the amount of carbonate may be made with sufficient accuracy for clinical purposes by the Purdy centrifuge method. Procure a 15-

cc. graduated Purdy centrifugal tube, fill it to the 10 cc. mark with the urine and add 20-percent nickel sulphate solution up to the 15 cc. mark. Mix well, set in the guard of the centrifugal machine, with a comparison tube balancing, and centrifuge for three minutes at the speed commonly obtained—1500 revolutions to the minute being usually available. At the end of three minutes take the tube out of the guard, read off the height of the packed-down precipitate and record. If the height of the precipitate is measured by the line indicating 0.5 cc., the amount of soda is large, if obtained at a speed of 1500 revolutions per minute, in 3 minutes.

Cloudy urine should be filtered beforehand and, if the nickel sulphate solution is, for any reason, cloudy, it also should be filtered.

Urine normally acid in reaction and containing no soda will, when clear, show no deposit in the tube sufficient in amount to be measured. In the case of all alkaline urines, the degree of alkalinity can be measured, with sufficient accuracy for clinical purposes, by the centrifugal method with nickel sulphate.

It goes without saying that, in cases where there is retention of urine in the bladder or renal pelvis, with decomposition of urea by the action of the *micrococcus ureae*, the amount of alkaline carbonate (ammonium carbonate) in the urine may be much increased, though no soda at all is taken by the patient. But, in such cases, the odor of the urine plainly suggests ammonia and, with the microscope, crystals of triple phosphates may be found; hence no error is likely to be made by the careful clinician.

TYPICAL CASE OF SODA TAKING

In the urine of a man of middle age who had been taking soda for "stomach trouble," the following was the urine analysis:

Volume of specimen furnished: Six ounces—180 cc.

Reaction: Alkaline.

Specific Gravity: 1028.

Urea (percent): 0.8.

Indican: Slight.

Albumin: Negative.

(Urine foams with acids).

Sugar: Negative.

Bile: Negative.

Acetone bodies: Negative.

Nickel sulphate test (quantitative): 5 percent volume.

Microscope shows no crystals.

Suspicion as to the presence of soda in this urine was aroused by the discrepancy between the specific gravity (which was 1028) and the percentage of urea, (which was only 0.8). The foaming of the urine with acids; the absence of the odor of ammonia; and the high percentage of nickel sulphate precipitate confirmed the suspicion, absence of crystals of triple phosphate being additional proof.

DATA FOR REFERENCE

Normal urine, having a specific gravity of 1020, after addition of 0.5 Gram of sodium bicarbonate (purified) to 100 cc., shows a specific gravity of 1022. If to 10 cc. of such urine, is added 5 cc. of a 20 percent nickel sulphate solution and the mixture is centrifuged, at about 1500 revolutions per minute, for three minutes, the white precipitate settles down to the 0.2 cc. mark on the percentage tube, indicating a volume percentage of 2, as we use the expression clinically.

Urine naturally alkaline when voided and containing no sodium bicarbonate may show three-percent precipitate with the nickel sulphate, measured by volume in the centrifugal tube. A percentage of five is large and shows strongly alkaline urine.

25 East Washington Street.



THE SEMINAR

CONDUCTED BY

MAX THOREK, M.D. (Surgery)

GEORGE B. LAKE, M.D. (Medicine)

[NOTE: Our readers are cordially invited to submit fully worked up problems to the *Seminar* and to take part in the discussion of any or all problems submitted.

Discussions should reach this office *not later* than the 1st of the month following the appearance of the problem.

Address all communications intended for this department to *The Seminar*, care CLINICAL MEDICINE AND SURGERY, North Chicago, Ill.]

PROBLEM NO. 4 (MEDICAL)

Presented by Dr. F. N. Richardson
(SEE CLIN MED. AND SURG., MAR., 1929,
P. 187)

Recapitulation: A man 45 years old and weighing 200 pounds, had a "cold" in June, 1927, followed by cough and "rheumatism." In December he noticed shortness of breath and swelling of the ankles and consulted a young physician who was his "chum" and who told him that his heart "squeaked." He was given digitalis and caffeine, barbituric acid hypnotics (for insomnia) and ephedrine (for "asthma").

In January, 1928, the chum-physician called in consultation one of his former teachers, who confirmed all that had been said and done.

In April the attendant abandoned hope, and so informed the family. In July paracentesis of the abdomen twice withdrew large quantities of fluid. No attention was paid to the patient's diet. He ate heartily of whatever pleased him.

When seen, in consultation, by Dr. Richardson, the patient's urine was loaded with albumin, his heart was laboring and leaking and the entire body was waterlogged with edema.

Requirements: (1) Errors, if any, in

early management of the case; (2) prognosis; (3) suggested treatment.

DISCUSSION BY DR. CLARENCE G. THOMPSON, NORWICH, CONN.

This case affords an excellent opportunity to express my own view regarding treating friends or chums professionally. To me, it is one of the bugbears of professional practice and I am afraid that we physicians are to blame for the many poor results which we all too often obtain.

In the first place, our dear friends seldom take our advice seriously and, in return, we examine them superficially and greatly minimize our findings, for fear we may unduly frighten them, wishing, naturally, to avoid anything which would in any way strain a friendship.

In this particular case, it is possible that proper instructions as to diet, exercise, clothing and hours of work and sleep might have helped this patient, provided that such instructions were given seriously and their importance stressed. Lately, I have made it a rule to treat all persons coming into my office, friends and newcomers, as *cases*; to examine them thoroughly; and to give my opinions honestly, and I really believe that I have obtained better results.

As to the *prognosis* in this case; in my opinion, it is very serious. Here we have a badly diseased and overworked heart and kidneys, with striking evidence of decompensation. Medicines will be, at the most, palliative; diet of very slight use at this stage of the illness; all other forms of therapy of little avail.

In this case, the real help should have come at the beginning. I can thoroughly sympathize with the original attendant on

this case, for I have treated close friends, with little benefit, for the simple reason that neither the patient nor myself took things seriously enough.

The practice of Medicine is no joke, and each case is entitled to serious-minded and close application. Patients, like all other human beings, like to be flattered, and the best form of flattery, at least in Medicine, is to give good, conscientious service and be honest with all of our patients. It may be the longer road but it will be the better and more successful road in the final analysis.

DISCUSSION BY DR. J. R. SMITH,
WARSAW, MO.

As a diagnosis was not asked for in this problem, I shall not suggest one, though it seems very evident.

As to errors, the only *correct* step I notice was when the patient's friends sought other medical advice than that originally employed. Any physician who would permit a patient in the condition outlined in this problem to have a heavy and indiscriminate diet is—words fail!

Prognosis is difficult without seeing the patient personally. The general appearance, condition of the tongue and the feel of the pulse give much information to an experienced diagnostician. A great deal can be learned from studying the pulse and the heart by means of the five senses.

The indications here are not bright, but, if the patient is able to endure a course of elimination which will relieve the portal circulation and the strain on the heart, he may recover.

For treatment, if the patient is strong enough to make it safe, I should give 1/10 grain of calomel, with one grain of "intestinal antiseptic" (triple sulphocarbolates), every half hour until the stools were greenish-black and free from offensive odor, if it took fifty doses to produce that result.

If the edema was still prominent, after this purgation, I should give tablets of Anasarcin or Anedemin until it was relieved. These are proprietary remedies, but they acted very satisfactorily on my own person a year ago, under somewhat similar circumstances.

DISCUSSION BY DR. E. C. JUNGER,
SOLDIER, IA.

No wonder the general practitioner is slipping, in the eyes of the public, when

a patient, as described in this problem is treated (?) without considering diet, air, water, exercise and rest as the most potent and first-to-be-thought-of remedial agents.

A blood pressure that goes over 200 mm. should scare almost any average physician into looking for the cause, which is generally overeating. Elimination, by the bowel and by sweating, should be started and the diet limited to a few leafy vegetables and a little milk. Blood letting might help, if there is no anemia; also massage, diathermy (to stimulate the liver) and rest in bed (as the heart will not stand the strain of exercise).

If conditions do not improve within 60 days, the case is hopeless, as there is no reactive power in the patient's anatomic make-up and the physiologic functions are suspending operations.

DISCUSSION BY DR. GEORGE A. BENDLAGE,
LONG BEACH, CALIF.

The following is offered as a *constructive* criticism. I feel that every answer to this problem should be of a constructive nature. Destructive criticism should not be the rule.

This case is, apparently, one of *cardio-renal* disease, the renal condition being the primary condition. The errors as I see them are:

- 1.—In not realizing the seriousness of acute nephritis.
- 2.—In not putting the patient to bed and at absolute rest.
- 3.—In not giving the patient a specific, salt-free, nephritic diet.
- 4.—In not knowing the kidney function, blood chloride, or even the quantitative percentage of albumin.
- 5.—In not causing diaphoresis by the application of heat.
- 6.—Vigorous use of Novasurol is to be strongly opposed by the consideration that we may irritate and consequently damage the renal epithelium to a greater degree.
- 7.—Allonal, Luminal, codeine, Pyramidon and the like do not benefit a failing kidney.
- 8.—The "asthma" was, no doubt, a beginning hydrothorax; (sometimes designated "uremic asthma").
- 9.—Ephedrine and large doses of digitalis are not very "beneficial" to this type of patient.
- 10.—The edema surely could not have been overlooked.

Prognosis: The prognosis is very grave, and the patient's family should be thus advised. (However, so far as we are concerned, the facts to consider are: the reactivity to diaphoresis, the microscopic changes in the urine, the blood changes and the albumin content in the urine. Improvement in these findings must mean improvement in the patient).

Treatment: (1) Hygienic; (2) symptomatic; (3) absolute rest in bed; (4) absolute salt-free, nephritic diet (5) diaphoresis; (6) mild cathartics (no calomel!), mild diuretics, paracentesis when indicated by great ascites; in fact, any method that will benefit and preserve the patient's life until improvement sets in.

If recovery takes place, guard against overexertion, errors in diet, exposure to cold and secondary anemia. Chart the fluid intake and the amount of urine voided.

**DISCUSSION BY DR. GEORGE ACHESON,
ST. MARTINS, N. B., CANADA.**

The description of the history and symptoms in this case leaves much to be desired. In fact, to be able, from these meager data, to make a differential diagnosis between subchronic glomerulo-nephritis and cardiac decompensation is practically impossible. I should be inclined, however, to regard the primary disease as a nephritis; and, if so, then, in my opinion, digitalis or other diuretics were contraindicated. I think, too, that a great mistake was made in not regulating the patient's diet.

Prognosis depends largely on the degree of cardiac complication. If compensation has reached the limit, a fatal termination will not be long delayed, probably from uremia, if not from pulmonary edema.

Treatment: Bearing in mind the etiologic relationship of focal infection to nephritis, a careful search should be made for any such local foci and they should be removed.

Absolute rest in bed is to be insisted on for a long time, and restriction of the work of the kidneys, cutting down on fluids, salts and proteins, an exception being made, however, of magnesium sulphate, which may be given freely.

I might mention here, that the proprietary preparation known as Anedemin has proved valuable in such cases where ascites and general edema are marked. This preparation is a combination of squills, strophanthus, apocynum and sambucus.

ADDITIONAL DATA AND DISCUSSION

BY DR. RICHARDSON

Our treatment, in the case of Mr. H., commencing July 23, 1928, was as follows:

Prescription No. 1:

B. Pill Elaterium (Clutterbuck) gr. 1/10 (0.0064).

Sig: Two pills, three times a day.

Prescription No. 2:

B Lloyds specific Apocynum 5i (4.00)
Aqua 5vi (190.00)

Mx: Sig: A teaspoonful every 2 hours.

Prescription No. 3: A Homeopathic combination tablet containing Apis 6X, Arsenic 3X, Bryonia 3X. Sig: One tablet, four times a day.

Diet: A milk diet with some cereal foods (Shredded Wheat, Grape Nuts and oatmeal) was allowed.

This treatment was continued until about the middle of September, 1928. By this time practically all dropical effusions had disappeared, though no tappings had been done.

By the first of October the patient was on his feet and was allowed to drive his car. At present he is doing nicely but still has some albuminuria and therefore requires medical supervision for a time, though little evidence of cardiac decompensation now exists. He has been on one hunting trip since the season opened.

Discussion:

Error No. 1: The first doctor, being a friend and chum of the patient, should not have assumed professional charge, but should have advised calling an outsider—a disinterested person.

Error No. 2: He should not have called in consultation one of his college professors. There is too much possible bias here, which may lead to mutual error. One should call, as a consultant, someone with whom one is less in rapport.

Error No. 3: Not only allowing an improper diet, but even taking part with the patient in eating foods which the patient should not have had.

Error No. 4: Jumping at conclusions, just because of "dropsy", and centering all effort on the heart, while overlooking a possible nephritis.

Error No. 5: Being too "cock sure" in signing any man's death certificate.

Prognosis: Our prognosis was, at first, quite guarded; yet the results, to date, suggest a fair lease on life.

Treatment: Already submitted above.

However, the patient will require more or less constant medical supervision as long as he lives. The teeth seemed to be the seat of focal infection, so all were extracted and a complete denture provided.

CLOSING DISCUSSION BY
DR. GEORGE B. LAKE

This case forcibly suggests that any person who is seriously ill should pray to be delivered from his medical intimates. Emotion beclouds the intellect, and a physician who is a comparative stranger is likely to take a cooler and sounder view, in an emergency.

The errors in the early treatment have been so well discussed, by Drs. Thompson, Bendlage and Richardson, that little or nothing need be added there.

Dr. Richardson's additional data have cleared up the prognosis.

Treatment: The management of the case, as outlined by Dr. Richardson, worked, but still some things may, with profit, be said.

The fundamentals here are to reinforce the failing heart, to relieve the overworked kidneys and to reduce the edema.

A number of drugs have power to help the heart, but none of them is so reliable or has received so much study as has digitalis. The only possible value to be had from the proprietary products, Anarsarin and Anedemin, would be from the squill, strophanthus and apocynum which they contain. Both of these drugs have a digitalis-like action, but are inferior in many ways to foxglove. It is doubtful if Dr. Richardson's Homeopathic remedies aided materially.

For drugs, then, I suggest prompt and complete digitalization, according to the well known rules for this procedure and using a preparation with which the medical attendant is, personally, thoroughly familiar (this is important!). With the digitalis, to reinforce its diuretic effect, Euphyllin (theophyllin-ethylendiamin) may be given, in doses of 0.2 Gm. after meals. This latter drug may be continued after the digitalis is stopped, giving three 0.1 Gm. doses daily for a long period, if indicated.

At the time Dr. Richardson was called, the procedure to be recommended in addition to the digitalis and Euphyllin, was: (1) absolute rest in bed; (2) a diet of buttermilk and fruit juices, with the pos-

sible addition of glucose, to supply carbohydrate, until the edema began to subside, and then gradually reenforced by easily digested foods; (3) one-ounce doses of saturated magnesium sulphate solution (I consider this safer than elaterium) every 1 to 3 hours, until copious, watery stools appeared, and then enough to keep the dejections free; (4) free diaphoresis, by hot, moist packs, to relieve the kidneys.

After the immediate danger was past, the case required careful study, followed by elimination of any sources of chronic infection and the readjustment of the entire life and habits of the patient, upon the basis of the functional capacity found to exist in the heart and kidneys.

This man will never be sound and well, but if he has the will power to keep his diet and activities strictly within the bounds set by his medical attendant, after a thorough investigation of his entire organism, he may live, in reasonable comfort and efficiency, for a number of years.

PROBLEM NO. 6 (MEDICAL)
SUBMITTED BY DR. RAYMOND C. MUNDT,
OCONOMOWOC, WIS.

A healthy young man, 22 years old, attended a masque ball as a snow-man, wearing a union suit to which cotton batting was fastened. He asked for a cigarette, and a friend thrust one through his mask and, in attempting to light it, set fire to the cotton, so that he was enveloped in flames.

The burned underwear was removed in the dressing room and temporary dressings of a picric acid burn ointment applied to the worst burns.

At the hospital he received morphine, gr. $\frac{1}{4}$ (16 mgm.) and atropine, gr. $1/150$ (0.44 mgm.), hypodermically, and 1,500 units of tetanus antitoxin.

Careful examination revealed that the burned area covered the face and neck (first degree); the trunk, except the left shoulder and a median strip of skin back and front (first and second degree); thighs and legs, anterior and lateral aspects (first and second degree); arms and forearms, in patches (first and second degree); hands and ankles (second degree). It was learned, later, that the mouth and pharynx had been burned moderately severely.

Requirement: State prognosis and outline treatment in detail.

CLINICAL NOTES AND PRACTICAL SUGGESTIONS

Protein Shock Therapy in Influenza and Pneumonia

IN 1917, I saw a patient in bed, semi-conscious and with abdominal tympanites, involuntary discharge of stools and urine, delirium and irregular heart action. This patient had had typhoid fever, and after having been up ten days, he relapsed, and was in this condition when I saw him.

I gave him, intravenously, one hundred million typhoid bacilli. An hour afterwards he had a very severe chill (more like convulsions), and this was followed by very profuse diaphoresis; indeed, he was still sweating when I saw him twenty-four hours afterwards. He was then conscious, his pulse full and regular, his temperature sub-normal, and he had every symptom of a surprising recovery.

I had used this protein shock in a few other unrelated diseases, with results which led me to believe that it may be of use in stimulating immunity in any infection. I then determined to try it out in hopeless cases of infection, as a matter of experiment.

In 1919, I was face to face with a hopeless case of influenza and pneumonia, judging from my experience in 1918, with a half-dozen fatal cases. This patient was cyanotic, with irregular heart action and extreme congestion in both lungs. She was obese, and I could not get a needle into the basilic vein. I therefore gave her one hundred million typhoid bacilli in the vein of the dorsum of the hand. This was followed by a chill and a sweat, and in twenty-four hours she was 50 percent better.

I then repeated the same dose, which was followed by a similar chill and sweat, and in 24 hours more the improvement was much more noticeable. In fact, she was so improved that I thought it might be unnecessary to give a third dose. Within 72 hours after giving the first intravenous treatment, I visited the patient and found her condition not so satisfactory as on the day before. I, therefore, gave a third intravenous treatment, and this was followed by a chill and a sweat, and uncomplicated convalescence.

The next case of influenza and pneumonia recovered promptly after one intravenous treatment. I have used this in desperate cases of influenza and pneumonia, off and on, ever since 1919, without a fatality. One case had meningeal symptoms following influenza, which yielded to several treatments. I have treated a half-dozen desperate cases of lobar pneumonia with similarly gratifying results.

Case 1.—Mr. J. A. S.; age 60; taken sick with a chill; temperature 104°F; pulse 140; severe pain in the left lung. **Diagnosis:** Lobar pneumonia.

He was given numoquin, vaccine and morphine. On the fourth day, his temperature was still 104°F.; restless and sleepless.

He was then given 50 million typhoid bacilli, in the vein. This was followed, within an hour or two, by profuse diaphoresis. The temperature next morning was 99°F. He made an uneventful recovery. No other treatment was necessary and none was given.

Case 2.—Mrs. O. A. K.; age 30; pregnant four months; was seen with influenza and pneumonia on the fourth day of the disease. Her temperature was 105°F.; respirations 60; pulse 105. She was given 50 million typhoid bacilli,

and 24 hours afterwards she was given another 50 million. Each dose was followed by severe sweating. After the second dose her temperature was below normal, and she recovered rapidly.

Case 3.—Mr. S. Jr.; age 15 years; had influenza and pneumonia with a temperature $104\frac{1}{2}$ °F. He was given 30 million typhoid bacilli, intravenously. His temperature, the next morning was normal and he recovered rapidly.

Case 4.—Mr. W. A.; age 30; sick with influenza and pneumonia; temperature $103\frac{1}{2}$ °F.; considerable involvement in both lungs. He was given, on the 4th day of his illness, 50 million bacilli, and two days later 50 million more. Each treatment was followed by a severe sweat, the temperature going below normal. After the second treatment, he made an uneventful recovery.

Case 5.—Baby T.; two years of age; temperature 105 °F.; influenza and pneumonia; was given 6 million bacilli intravenously. Temperature fell to 99.5 ° in the morning and, although there was considerable congestion in both lungs for a few days, he recovered uneventfully.

Case 6.—A. P. Jr.; 8 years of age; was seen with influenza and pneumonia, after he had been in bed for a week. Temperature was 105 °F. He was given $12\frac{1}{2}$ million bacilli and the next day his temperature dropped to 103 °. In a few days he was entirely well.

Case 7.—Mr. J. N. C.; age 75 years; had been sick with influenza and pneumonia for two weeks. He had considerable congestion at the base of both lungs. This man had been in poor health for years before and, owing to kidney insufficiency, I gave him only 25 million typhoid bacilli, after which he had a slight sweat. In four days, I repeated the dose with similar results and satisfactory convalescence.

Two colored children, ages 6 and 2 respectively, were seen with influenza and pneumonia, with a temperature of 104 °F. each. The elder boy was given about 17 million typhoid bacilli, the younger 10 million, and in 24 hours, the older boy's temperature was 102 ° and the younger child's $99\frac{1}{2}$ °. At the end of 24 hours more their temperatures were 100 ° and 99 ° respectively.

Occasionally, I come across a case that does not seem to be benefited by this treatment. I treated two such cases this season and, although I got no spectacular result, neither one of them died. They recovered rather slowly.

I believe that, where 50 million bacilli are not followed by great improvement, especially when there has been no chill, the dose should be doubled within 24 hours; and where no improvement follows the second dose the treatment should be continued daily until the temperature falls and convalescence is established.

Throughout my experience, I have never given more than 4 treatments to any one patient, and very often one treatment is all that is required.

One patient, sixty years old, was seen with influenza of the cerebro-spinal type. He was semi-comatose, delirious and had involuntary urination. Fifty million bacilli were injected in the vein, mixed with one 10 cc. ampule of 1:1000 Metaphen. This was followed by a sweat, which continued more or less for a whole day, the temperature falling to below normal. This patient, although he had no fever, required about ten days to become entirely rational.

I have never used this treatment except in cases that were severe or those that I was afraid were going to become so. I am of the opinion, nevertheless, that it ought to be curative in early cases of influenza without other complications. I believe that children react more quickly than do most adults.

M. A. SHADID, M.D.

Elk City, Okla.

A Mental Code for Every Child

HERE is a rule for each day of the week has laid down by a wise man who has spent his life in studying child-nature as a guide to child-training (Prof. Burnham):

First: Every child should act out its impulses as freely as possible, be active in play and work, express its feelings, assert itself, explore, handle, investigate, satisfy its proper cravings, which include abundant rest in sound sleep.

Second: Every child should also be trained to control its impulses, to cooperate with others, to serve others as well as to be served. Control should come by direction, not by repression; not by blocking energy, but by organizing it.

Third: Every child should concentrate on what it is doing—short periods with good attention and no dawdling. Live one day at a time. Don't hold a grudge overnight. Start each day with a clean slate. Don't carry troubles over or borrow them ahead.

Fourth: Every child should have tasks that are simple and definite; decisions should be clear and prompt, carried out whole-heartedly; no worry or conflict—just a well-ordered daily program.

Fifth: Every child should be prepared to meet the little emergencies. Accidents and difficulties and disappointments will arise. Nature has provided resources to meet them and children should be ready with first aids. Pain, fear, sorrow, anger—they will all

come, both when "a feller needs a friend" and when he must get himself out of trouble. Training for emergencies is indispensable.

Sixth: Every child should be with other children. Every activity benefits by a social setting; working, playing, eating, even squabbling, as well as clubbing in gangs and teams, chumming with friends and battling with foes, giving and taking and growing in social training in home and school and playground.

Seventh: Every child should recognize and respond to its dependence on others; should have somebody to love and be loved by, somebody to look to for protection, some faith in the world about it, and reverence for the powers that rule, not on Sunday alone but all through the week.—JOSEPH JASTROW, "Keeping Mentally Fit."

Secondary Syphilitic Arthritis (A Report of Three Cases)

I HAVE had occasion to observe three cases of syphilitic arthritis, as an early secondary manifestation and preceding the eruptive stage.

These cases have been treated for rheumatic fever with the various salicylates, with no benefit whatever; one of these cases was very much aggravated by this drug.

The temperature runs high, the joints involved are painful and very tender, rest is impossible on account of the severe pain, and the patient is in a state of marked prostration.

The shoulder and knee joints were commonly involved in the three cases. The symptoms continue for six or seven days, when the classical eruption appears with the usual lymphnode involvement, a Wassermann test is made and the true diagnosis is established.

The questions involved are as follows:

Are we dealing here with a simple inflammation due to toxins that excite proliferation of the fibroblast-producing structures, due to a proliferation of the lining endothelium of the blood vessels and resulting in endarteritis; or are we dealing with a simple synovitis of serous character? We have a condition of multiple hydrops articuli which precedes the eruptive stage.

Pain, tenderness and swelling of the shoulder and knee joints are present; the joints are not stiff and the pain is not increased on motion. The bone and joint

symptoms at this stage are of short duration and the patient is up and about within a week, following treatment with the arsenicals and mercury.

The diagnosis in these cases depends on a careful history, or the appearance of the secondary eruption and the lymphnode involvement. There is always a history of a recent chance.

Hutchinson¹ states that syphilitic arthritis may occur during the early secondary stage, but is a rare condition and the pain is not severe. In my three cases the severe pain was the outstanding symptom, and I believe that these pre-eruptive joint conditions are not rare.

On the other hand, Martin² believes that arthralgia and synovitis are common conditions, as an early secondary manifestation, and yield very readily to treatment.

The literature reveals very little or nothing on these luetic, pre-eruptive joint conditions.

S. DEPORTE, M.D.
Oklahoma City, Okla.

Effects of the Adrenals

INCREASED secretion of the adrenal glands and the presence of an excess of epinephrin in the blood:

1.—Definitely exert a calorogenic action by providing an internal secretion which accelerates chemical reactions in the cells.

2.—Exert their primary action on cell metabolism, oxidizing muscle glycogen, increasing heat production largely by increased oxidation of fats and increasing the storage of liver glycogen by the deposition of part of the lactic acid, freed by the partial oxidation of muscle glycogen.

3.—Cause hyperglycemia by increasing storage of liver glycogen and depressing utilization of blood sugar.

4.—Lower the capacity of the cells for the utilization of dextrose.—*Journ. of Organotherapy*, Jan.-Feb., 1928.

Aneurysm of the Aorta (A Case Report)

THIS case illustrates the marked size sometimes attained by an aneurysm of the arch of the aorta.

1.—Hutchinson, J.: Syphilitic Joint Diseases. *Brit. M. J.*, 1892, I, 797.

2.—White & Martin: "Genito-Urinary Surgery and Venereal Diseases", p. 809.

Although syphilis is a common cause of aneurysm, this one was apparently due to physical strain, the patient having been a workman, accustomed to lifting heavy timbers. All tests for syphilis, at different times, over a period of years were negative, as was the history. This probably explains the fact that this aneurysm never did rupture, but killed the patient by exhaustion.



After being discovered in the chest it finally eroded the ribs anteriorly and presented itself beneath the clavicle, the protrusion slowly enlarging over a period of some five years. It then increased in size rapidly for several months. The photograph was made three weeks before the patient died, and the protrusion increased in size very much during that time. The usual physical signs were present.

WILLIAM G. PARKER, M.D.
Mt. Vernon, Illinois.

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A Diabetic Creed

FOR my own practical guidance, in 1923, I adopted a diabetic creed, but, like the best of the creeds, it has undergone alterations and I am sure will soon require more.

I believe at the beginning of this year, 1928:

1. That diabetes mellitus should be considered so probable, in any person who has 0.1 percent or more of sugar in the urine, that he should be watched for life.

2. That normal weight or less should be insisted upon in each diabetic, suspected diabetic, or relative of a diabetic, but that therapeutic loss of weight should be extremely gradual.

3. That mildness of the diabetes should be assumed, a long life be expected, and the patient be treated accordingly. Hence, the nearer the proportions of carbohydrate, protein, and fat in the diabetic diet conform to those of the normal diet, always seeking to avoid glycosuria and hyperglycemia, the better it will be for the patient, even at the sacrifice of weight, though not of strength. A carbohydrate tolerance, unutilized, retrogrades.

4. That reversal of the diet; namely high-fat and low-carbohydrate, assumes the contrary (severity of the diabetes), is dangerous both in principle and in practice and, unless accompanied by a minimum protein intake, frequently ends in coma.

5. That undernutrition (a) prevents diabetes and (b) is the foundation-stone of diabetic treatment; but if hunger can be avoided, a smaller number of patients will yield to temptation, break treatment, and in consequence die of coma.

6. That extreme inanition with loss of body protein is not worth while simply to render the blood-sugar normal.

7. That diabetes of itself is not fatal, but that death ensues from other diseases or complications; that coma is an accident, usually inexcusable, and is more easily prevented in 99 cases than treated in 1; and, therefore, diabetics when ill from any cause should (1) go to bed, (2) keep warm, (3) take a glass of hot water, tea, broth, orange juice, or oatmeal water gruel every hour, (4) empty the bowels with an enema, (5) call a doctor, who, if he finds acidosis the dominant factor, will give insulin and caffeine, may wash out the stomach and inject subcutaneously a solution of salt. A diabetic under treatment with insulin should not omit it unless sugar-free and under medical supervision.

8. That the diabetic should be regarded as unusually susceptible to arteriosclerosis and should be treated with this in view. The carbohydrate in the diet should not long remain under 100 grams, and foods high in cholesterol should be restricted.

Gangrene and the complications therefrom can usually be avoided by treatment with posture, by washing the feet daily and by reporting the discovery of any lesion to the physician.

9. That any patient with a tolerance of less than 100 grams of carbohydrate should (a) test his own urine for sugar, (b) keep sugar-free, and (c) take home food scales and use them until he can keep sugar-free without them.

10. That the immediate aim of practice should be to simplify treatment and to encourage physicians to develop, in their own communities, homes and clinics to which they may refer their patients for a diabetic education, in case their own time and facilities are inadequate.

11. That firm persistence in a strict diabetic diet (a) finds ample justification in the patients kept alive by it to profit by insulin; and (b) is essential to safety and success in the use of insulin. Insulin utilizes rather than replaces the advances in diabetic treatment hitherto achieved."

ELLIOTT P. JOSLIN, M. D.

From "Treatment of Diabetes Mellitus" (Lea & Febiger).

Another Bloodless Delivery

I WAS much interested in Dr. I. P. Israel's case of bloodless delivery (see CLIN. MED. AND SURG., Mar., 1929, p. 196), which recalls to my memory a similar case in my own practice.

On May 16, 1897, I delivered a woman of a 10-pound, female child. *There was no hemorrhage whatever.* The mother was of medium height and weight and had a heavy suit of pubic hair. There was no other abnormality in the labor.

The child was healthy and normal in every way, except that, at one month of age, she began to menstruate, and repeated the process regularly, every 28 days, until she was a year old, when the family left town and I lost track of them.

R. H. LASATER, M.D.

Mesquite, Tex.

[We cannot question the accuracy or powers of observation of Dr. Lasater or Dr. Israel, but it is extremely difficult to conceive how the highly vascular placenta can be separated from the equally vascular wall of the gravid uterus, without giving rise to rather extensive hemorrhage. If

anyone has a suggestion as to the possible mechanism of a bloodless delivery we shall be interested to hear it.—Ed.]

Still Another

IN COMPLIANCE with the request for reports of cases of bloodless deliveries (CLIN. MED. AND SURG., March, 1929, p. 196), I wish to add one that I saw in 1885, or thereabouts, while practicing at Camas, Washington.

In this case, no blood or other fluid appeared, before, during or after the delivery of the child. When I cut the cord, the end dropped on a clean, white cloth and left a small blood stain. That was all!

The child was healthy and the mother made an uneventful recovery. I gave no medicine of any kind, either before or after the confinement. The family reported that there was no lochial discharge.

T. C. HUMPHREY, M.D.
Portland, Oregon.

A Third Bloodless Delivery and a Suggested Explanation

MY ATTENTION was called to the case of bloodless delivery reported by Dr. I. P. Israel, of Villa Saucilla, Mexico.

More than twenty years ago I was practicing in a little town on the Delaware River, where I attended a woman in her thirteenth confinement. There was not a drop of blood, except where the umbilical cord was cut. I remarked about how strange it was, and the mother said that there had never been any blood with the twelve others.

My explanation of the absence of blood is that, in the primitive state, there should be little or no hemorrhage. In cows, sheep and pigs there is very little flow, due to the perfect separation of the placenta. Doubtless, in primitive woman, there may have been the same condition. Probably Adam and Eve did not have to call a doctor when Cain was born!

J. T. MALE, M.D.
Yampa, Colo.

The Liver Fad

A COMMENTARY on the intelligence of many who pride themselves upon keeping informed about new medical dis-

coverties is found in the increase in the general demand for liver. Authorities have announced that, while liver has great value in the treatment of pernicious anemia, it has no particular value for the diet of a healthy person. Yet such is the enthusiasm for new dietary suggestions that liver is now a fad, and those who really need it must pay an extra price because of its scarcity.—*Medical Progress.*

A Bascule for Roentgenograms of the Mastoid

DIFFICULTY is often experienced in obtaining satisfactory roentgenograms of the mastoid region, because the position of the patient is unsatisfactory.

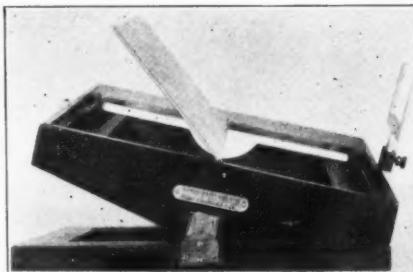


Fig. 1.



Fig. 2.

The bascule shown in Fig. 1 (invented and made by the writer) accomplishes the purpose satisfactorily, as the position of the patient's head can be accurately adjusted and controlled. The opaque flap permits the making of two exposures on one film,

so that the two slides can be compared, or a diseased mastoid can be photographed alongside of a normal one, for comparison.

Fig. 2 shows a patient in correct position on the bascule ready for exposure. The focal point is 1 1/2 inches behind the external auditory meatus and 2 1/4 inches above. It is important that the nose-post

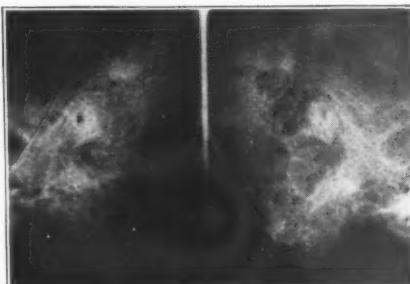


Fig. 3.

should be raised sufficiently that the head is parallel with the plate, with the alveolar process touching the lower part of the nose-piece and the glabella the upper part, as shown in the picture.

Fig. 3 demonstrates the duplication made with the bascule. These are two separate cases, one normal and the other showing some pathologic changes.

GUY R. BUISSON,
Technician in Roentgenology,
U. S. Marine Hospital,
New Orleans, La.

Sterilization of Syringes*

FOR sterilizing syringes for parenteral injections we use a copper sterilizer with a close fitting lid, 9x5x3/4 inches deep. We take our syringes (about twelve in number), remove the piston from the barrel and wrap a small rubber band tightly around the barrel so it won't slip off, and through one loop of the rubber band we slip the plunger. This holds the syringes together throughout boiling.

All syringes fixed in this manner are placed in the sterilizer and the needles, arranged in the little metal holders in which they are bought, are put in. Water is added and the sterilizer is boiled the desired length of time. Then the sterilizer is picked up in a towel and the water drained off through one corner between the lid and sterilizer proper (I might add that no gentle-

*Abstracted from *J. of Intrav. Therapy*, Jan., 1929.

ness is used in doing this). After the water has been drained, the sterilizer is replaced over the flame for two or three seconds so as to dry out any moisture.

The syringes and needles are left in the sterilizer and when one is needed it is quickly removed; the plunger is pulled out of the rubber loop and inserted into the barrel; the tip of the syringe is inserted into one of the needles and a slight prying motion releases the needle from its holder. By frequent tests we have found that the contents of the sterilizer, despite frequent openings, will remain sterile. We have used syringes that had been sterilized and kept in the sterilizer out in the office for a month. A sterilizer of this type, with the close-fitting lid, can be bought through any supply house.

We have used this method for the past five years with never a broken syringe. We sterilize at least four times every day.

Of course, after a time the rubber bands break and have to be replaced, but luckily all don't break at the same time and we have never gotten misfits by this. Some of our syringes have been in use for two years, with a daily average of 1 to 5 injections each.

ROBERT E. LEE, M.D.

Dept. of Bacteriology and Hygiene,
Medical College, State of S. Carolina.

Composite Diet Lists

SINCE the year 1886 I have been continuously engaged in general practice and have felt the need for convenient, economic diet lists. During all this time it has been my custom, which is common to practitioners generally, to dismiss the matter of diet by stating to the patient, "You should diet", which means nothing and amounts to the same. I justified myself in giving such advice on the grounds that preparing a diet list required too much time and effort for the fee that could be assessed.

Recently I read in the public press the report of a meeting addressed by E. V. McCollum, at Philadelphia, on the subject: "How To Keep The World From Starving On A Full Stomach". I was especially interested in the comment of a distinguished auditor, President-elect Hoover, who arose at the conclusion of the address and said, "In my estimation, what you have told us tonight is the story of the most important discovery of modern times".

For such reasons I became intensely interested in the subject of diet and decided to try my hand at the construction of a list that would be convenient, reliable and economic. I studied the latest works and from such sources selected a variety of foods and assembled them on a single folder, giving the number of each to be consumed at each meal and their estimated caloric values. Three of these lists were prepared, as follows: Normal Diet; Reducing Diet; Acidosis and Diabetes Diet. These I have designated as composite diet lists because, instead of making three separate lists for breakfast, dinner and supper and multiplying that by seven for each day of the week, they are all assembled on a single folder and the patient is directed to select a certain number for each meal. If one selection is not available, another can be used. It is in this sense a composite list.

In the Reducing List the amount of each helping is specified. It offers nothing new or original as to diet and its only purpose is convenience and economy. The doctor who keeps a few of them on his desk can hand the indicated list to his patient with no further comment than to follow the printed instructions. Another convenience is that many times an article of food listed is out of season or at least out of market, and by this arrangement of listing a number of foods, such as are available can be selected.

Appended is the composite *normal* diet list:

BREAKFAST

Select Six

Melon—Orange Sections—Sliced Peaches—
Banana—Apple Sauce—Stewed Prunes—Grapefruit—Rhubarb—Corn Flakes with Milk and Sugar—Shredded Wheat with Milk and Sugar—
Cream of Wheat with Milk and Sugar—
Wheatena with Milk and Sugar—Puffed Rice with Milk and Sugar—Pettijohns with Milk and Sugar—Coddled Egg—Scrambled Eggs—Melba Toast and Butter—Bacon—Omelet with Currant Jelly—Poached Egg on Toast—Liver and Bacon—Broiled Ham—Toast and Butter—
Wheat Muffins and Butter—Jelly—Coffee with Cream and Sugar—Orange Juice—Grape Juice and Lemon.

DINNER

Select Eight

Tomato Bisque—Vegetable Soup—Cream of Celery Soup—Melon—Cream of Corn Soup—
Split Pea Soup—Fresh Fruit Cocktail—Roast Chicken with Dressing—Roast Beef—Breaded Veal Chop—Baked Squash—Sirloin Steak—
Roast Lamb and Mint Sauce—Lamb Stew with Vegetables—Baked Halibut—Chicken Broth with Rice—Scalloped Potatoes—Swiss Steak—

Mashed Potato and Gravy—Browned Potatoes—Hashed Brown Potatoes—Potato Cake—Baked Sweet Potato—Parsley Potato—Buttered Celery—Creamed Cauliflower, Small Peas—Buttered Carrots—Stewed Tomatoes—String Beans—Egg Plant—Buttered Onions—Sliced Tomato—Cold Slaw—Pineapple and Marshmallow Salad with Whipped Cream Dressing—Tomato Salad and French Dressing—Waldorf Salad and French Dressing—Waldorf Salad—Pear and Cottage Cheese Salad and French Dressing—Orange and Grape Salad—Lettuce Salad and French Dressing—Broiled Chicken—Stuffed Prune with Cottage Cheese and Whipped Cream—Pear and American Cheese Salad with French Dressing—Bread and Butter—Fruit Sherbet—Wafers—Celery Hearts—Bread Pudding and Fruit Sauce—Chocolate Sundae—Cake—Apple Betty and Hard Sauce—Cottage Pudding—Fruit Jello—Gingerbread and Whipped Cream—Pineapple Sundae—Tapioca Cream—Tea—Coffee.

SUPPER

Milk—Bread—Butter

In Addition Select any Six of the Following List

Creamed Macaroni—Creamed Chicken on Toast—Liver and Bacon—Stuffed Potato—Braised Sweetbreads with Mushroom Sauce—Cheese Souffle—Baked Beans—Boiled Rice—Jelly Omelet—Baked Potato—Hermits—Chicken Souffle with Mushroom Sauce—Spinach on Toast with Poached Egg—Buttered Asparagus—Baked Sweet Potato—Baby Lima Beans—Scalloped Cabbage with Cheese—Creamed Potato—Buttered Italian Squash—Spanish Pickles—French Spinach—String Beans—Egg Plant—Baked Tomato—Buttered Peas—Braised Lettuce—Assorted Fresh Fruits—Baked Apple—Fresh Pineapple—Sliced Peaches—Raspberries—Cookies—Combination Vegetable Salad with Boiled Dressing—Corn Bread—Hot Biscuits and Butter—Apricot Whip—Peach Compote—Sponge Cake.

The above list has a caloric value of approximately 2383 calories per day and the arrangement is the same in the other lists.

J. T. SCOTT, M.D.

St. John, Kans.

[There are several advantages in Dr. Scott's scheme, which will be obvious at once. But there is one disadvantage which may not be so readily seen.

There is nothing which most patients appreciate so much, and for which they will pay so readily, as *individual attention*. The handing out of one of these slips will, no doubt, save the physician much time and will give the patient better dietary instruction than he would ordinarily receive, under the slipshod methods now in vogue. But it does not provide for individual peculiarities and idiosyncrasies, and it savors of routine, which produces a bad effect on many patients.

With such a list as a basis, it should be

possible to have a document typewritten for each patient, omitting such articles as were inimical to him, and signed by the medical attendant. This would look more like individualization.—ED.]

The Therapeutic Value of Changed Surroundings

I WAS consulted by a well known artist, who complained of lack of energy, inability to concentrate, lack of force and distaste for application. He had no appetite, and experienced a feeling of faintness after a short period of work at his easel; if he persisted in his work he became nauseated. In general appearance he was slender, rather anemic and his skin had a yellow tint. He was 38 years of age.

I went over him carefully; heart, arteries, lungs, liver, stomach, basal metabolism, blood, urine and fecal analysis and eye tests. Nothing!

Having come into contact with many artists of every kind, I long since learned something of their psychology, with the result that I told my patient: "What you need is a change of scene, air and occupation. A month or six weeks' rest will restore you to your normal energy and activity."

I recently saw a letter he wrote to a friend describing this period. I give it practically verbatim:

"My doctor had overhauled me for an hour, pummeled me, 'ninety-nined' me, tipped me, and put me through all the usual tests. Perfectly sound; simply tired out! Change of scene is the verdict. Well, he may have been right, but through a variety of circumstances there could be no change of scene for me for several weeks. We can buy most things today, but not yet the wand that will transport us to new and delightful surroundings and get us back without any disaster to business that won't wait.

"Something led me to recall a conversation with a friend a few days before. He had just returned to his home after a long absence and had found 'all the dear old bits of furniture in their old places, just as they were 40 years ago.' I began to visualize a way out of my difficulty. One of my troubles surely was that of constantly seeing 'the same old bits' in their old places; the same colored walls; the same electric light fittings; the same carpet; everything always the same.

"I bethought me of a plan. It would cost money, but it would tide me over until I could get out of town for the fresh air, which my rooms did not afford me. It was not till the small hours that I retired, with a scheme complete for the morning.

"I first broke the news to the maids. The decorators would be coming in, there would be a little furniture moving to do and, of course, that dread scrubbing when the painters had gone. As I wasn't well and they are of a type of domestic that is rare today, they entered fully into the campaign.

"Before many hours had passed, that depressing grey on the wall had disappeared, to make way for a most cheerful apple green. The pre-war carpet, a bit faded, had gone to the dyers, to be returned a delightful grape-red. The woodwork, at present covered with one of those miserable looking yellow varnished grainings of Victorian days, was soon in process of being painted a darker green to tone with the apple walls. That dead-looking blue-white which the average decorator discharges at ceilings, I had washed off and replaced with a pleasant cream. Away with the old-fashioned electrolier! In its place I procured a white alabaster bowl, flecked with veins like a sunset.

"The high, Adam-like grate, very charming but giving little heat, I also scrapped, making way for a built-in gas fire of the latest type. Doors and windows now rejoice in new fittings of a severe but pleasing antique lacquered brass.

"The chief stage was passed. The next, rearrangement of furniture, was a quicker and easier matter. Victorian-era pieces were cleared out, and from about the house I collected the most suitable eighteenth century bits, gathered together during many years. New taffeta chair covers of color similar to that of the carpet completed the realization of my dream.

"The scene was changed and it has done me a lot of good."

B. SHERWOOD-DUNN, M.D.

54 Bd. Victor Hugo, Nice, France.

Brief History and Old Results of Smallpox Vaccination

IT IS interesting to note, that although Jenner was born in the year 1749, and first published his method of vaccination in 1798, the prevention of smallpox by inoculation was both known and practiced for an indeterminate number of years previous.

Dr. Perrott Williams, of South Wales, England, in a contribution to the *Philosophical Transaction* of 1722, stated, that this method of inoculation was known in his part of England for upwards of 100 years previous, and that the transference was known under the name of "buying the smallpox."

In "Medical Essays," published in 1745, there is the following account of the pre-

vention of smallpox by inoculation, as it was practiced in Constantinople, in 1713:

"Dr. Timoni observes, that the method was introduced there above 40 years before, by the Circassians, Georgians, and other Asiatics, and that those who had the smallpox this way, always found the symptoms very mild, leaving few or no scars or pits in the face. Their method was by puncturing the skin of the arm, or any other part with a fine needle till it bled, and then applying, afterwards, a drop of the variolous matter of a good sort. The Doctor observes, that the pock procured by this method was always mild, under proper circumstances, provided the patient had not received the infection before; for then they often miscarried.

Dr. Pylarinus observes, that though the inventor of this method is unknown, it came first from Greece to Constantinople, where it lay in obscurity till the year 1701, when the Doctor saw it tried upon four patients, who happily recovered of them, under the management of a Greek woman, who performed it with great circumspection, and afterwards met with proportionable success."

At this period in the world's history, smallpox was universally prevalent, and its mortality was extremely high.

Dr. Nettleton in Yorkshire, England, made an estimate of the fatality of smallpox in the winter of 1721, and found that 22 had died in every 100 cases. Later in 1722 he made a further investigation, both as to the incidence of the disease, and the result of inoculation. His figures show 19 deaths in each 100 cases; while of 61 inoculated, not one died.

Dr. Jurin, in the *Philosophical Transactions*, made a comparison of the effects of inoculation on the mortality of smallpox and the mortality of those not so treated.

"By looking into the bills of mortality for 22 years past, he finds that upwards of one fourteenth part of mankind die of the smallpox, and consequently the hazard of dying of that distemper, to every individual born in the world, is at least one in fourteen; and that this hazard increases after the birth, as the child advances in age, will appear from what follows. Upon the whole, the Doctor infers, from the accounts transmitted to him of the natural and inoculated smallpox, that, of the former, will die at some time or other, one child in every fourteen; of adult persons of all ages, there will die one in five or six, or two in eleven. Whereas, by inoculation indiscriminately, there will die, of persons of all ages, but 1 in 60; but of inoculation with due caution, as practiced in England, there will die but one in ninety-one; whence the use and advantage of this method is sufficiently apparent."

R. S. MACARTHUR, M.D.
Los Angeles, Calif.

THE LEISURE HOUR

Verses from the Dictionary

A gushing young lady once took a young man who was rather a Philistine to hear a callow poet read some of his own writings.

As they were leaving, she exclaimed, with clasped hands and uprolled eyes, "Wasn't it *wonderful*?"

"Just words, without much sense to it," responded the stolid swain.

"I'd like to see you try it!"

"All right. When we get home I'll show you."

When safely ensconced in the parlor, he brought the dictionary and told the enthusiastic poet-worshipper to turn the pages at random and call off whatever words her eye chanced to light upon. With these and a few connectives, he constructed the following perfectly sound verse, which compares rather favorably with some of the modern socalled poetry:

Polite, polygamous poltroon
'Twas but his retrograde.
Barbel he was, yet barracoon,
This limner of Schlazade.

He spoke a scuppered scuppernong,
A scutiform corymb:
Too late, his pride to seep along,
Too late, indeed, for him!

To outward view conterminous;
To inward view adept;
His obfuscations verminous,
Myopic as he wept.

Too late! A gudgeon though it were
In sesquierred void
Might elevate his soul to her,
His crysoberyloid.

A Valuable Instrument

The chap who was discovered pounding his thumb with a hammer, suffering intently during the process, and who explained that he did it because it felt so good when he quit, must have been the brother to the young medical student who answered the quiz, "What metal instru-

ment has saved many lives?" with the cryptic word, "Pins."

"How do you mean, asked the medical instructor, "that pins have saved many lives?"

"By not swallering 'em!" replied the y.m.s.—Med. *Pocket Quarterly*.

A Modern Mother

A doctor, driving along a lonely, dark road at night, saw a comely young woman whose roadster had evidently stalled. She had the hood up and was peering intently at the engine. The kindly physician, seeking to be of aid, asked if there was anything he could do.

"No!" replied the feminus modernus, "I'm just heating baby's bottle on the hot engine!" and the doctor drove on.—Med. *Pocket Quarterly*.

Freedom of the Press

A Scotchman was discovered wandering around Detroit with a pair of rumpled trousers over his arm. "Can I help you in any way," asked a kindly citizen. "Mon," replied the Scot, "I'm looking for the Detroit Free Press."—*Exchange*.

Not Like Caesar's Wife

Some of the world's best humor creeps into printed pages through the omission or transposition of one small letter.

A London newspaper said: "For rent—room with one large widow." Omission of the "n" was responsible for the laugh.

"Immortal" is a hard word to handle. It is continually turning up as the "Immoral Lincoln," or the "Immoral Works of Milton."

Brete Harte, as a California newspaper editor, wrote the obituary of the wife of a prominent citizen, and said, "She was distinguished among the ladies of the city for her charity." The proof which came back to him read, "She was distinguished among the ladies of the city for her chastity."

He sent it back to the composing room, merely correcting the error by a question mark, assuming undoubtedly that the printers would enjoy the joke. But the printer was literal-minded, and probably lacked a sense of humor, because the item appeared in the paper, as follows: "She was distinguished among the ladies of the city for her chastity (?)."—*Imperial Type Metal Magazine*.

Mind of Mine

Mind of mine, awake and work,
Day and night:
Give birth to thought, keep moving ever,
Show your might;
Lose no time, for moments fly,
Give forth light.
There's a poem to be sung;
There's a book that finds no tongue;
There's a thought that pleads your pen,
A helpful thought unknown to men;
There are myriad things to do.
Oh, life's delight!

Philadelphia, Pa.

—S. SIZAIR.

Unique Collection Method

A small tradesman once put up the following sign in his shop: "Please don't ask for credit, as a refusal often offends."

Finding that this had little effect, and that his credit book was attaining great proportions, he resolved on trying another plan, and immediately fixed up another notice in place of the former one: "The names and addresses of all those who buy goods at this shop and don't pay for them can be seen in the credit book on payment of a fee of five cents."

The result was miraculous.

Not only did the curious pay their nickels by the dozen, but those owing accounts speedily settled them until the credit book was a thing of the past.

—Exchange

Curious Facts

A republic is a form of popular government in which liquor prohibition is put in charge of the tax collector and a Department of Agriculture gets out booklets on lamp shades.—*Detroit News*.

Do It Now!

If you see a feller sailin'
To'ards an ice-berg o' distress,
Clap on steam, an' go a runnin',
'Fore he sounds his "S.O.S.".
Hand your bouquets to the livin',
Do it now, before you part.
Smilin' faces often cover
Up a sore an' achin' heart.

H. C. BENNETT, M.D.
Lima, Ohio.

An Amended Diagnosis

Physician—From this brief examination I am of the opinion that you are suffering from clergyman's sore throat.

Patient—The hell you say!

Physician (hastily)—But it is quite possible I'm wrong. I will look again.—Med. Suggestions.

Turning Up Smiling

A young doctor, trying to be a little sobby while addressing a mothers' meeting, said: "In all this world there's nothing so sweet as the smile on the face of an upturned child."—*Boston Transcript*.

My Paw

Men are allus makin' fun of women, poor creatures,
Fer powderin' an' paintin', but Paw sez,
"Gosh Ding,
If the men would try to do somthin' to
improve their features,
It would be a good thing."

—B. H.

Diagnostic Pointers

Asthma

Constitutionally, asthma is associated with an overbalance of the parasympathetic nerves; an overbalance of potassium as compared with calcium in the cells; an increase in hydroxyl ions as compared with the hydrogen ions of the tissues; and a deficiency in certain sympathetic tonic endocrines, such as the adrenals, thyroid, parathyroids and gonads.

Sensitization to food pollens, etc., response to reflex impulses from other organs, also to chemical and mechanical irritation, and sensitiveness to weather changes, are only precipitating factors in a disorganized neurocellular mechanism.—DR. F. M. POTTENGER, Monrovia, Calif., in *J. Lab. & Clin. Med.*, July, 1928.

Renal Function Tests

Be acquainted with the value of all modern tests for renal function, but do not rely fully upon one. Don't forget that in some nephritic disorders, the employment of iodide of potassium and lactose is not unattended by danger.—*Urol. & Cutan. Rev.*, Oct., 1927.

Hypertension and Myocardial Disease

Of patients with essential hypertension, 75 to 80 percent die of myocardial disease.

Substernal distress and nocturnal dyspnea are significant of this condition.—DR. E. L. TUOHY, Duluth, Minn.

Pneumothorax

The ideal patient for treatment by pneumothorax is one running an active form of tuberculosis, but with the activity confined to one lung, having no added disease in some other portion of his body more serious to life than the tuberculosis itself. He must be an individual not so old in years

or in disease as to have lost every chance of restoration. Given such a case, pneumothorax may be expected definitely to turn the progress of the disease and restore the patient to health.—DR. L. SCHLENKER, St. Louis, in *M. J. & Record*, June 20, 1928.

Symptoms in Diagnosis

A diagnostician labors under an enormous disadvantage when he cuts himself off from a patient's symptoms. Not many diseases are symptomless, even in their early stages.—DR. LOGAN CLENDENING, Univ. of Kansas.

Hyperparathyroidism

Whether or not a clinical syndrome due to hyperparathyroidism occurs in man is not yet certain. Theoretically, such a syndrome is conceivable. In dogs, as Collip has shown, large doses of parathyroid extract (Collip) may produce a hypercalcemia with vomiting, drowsiness, pallor, atony and circulatory failure—an intoxication against which a 25 percent solution of dextrose seemed to be of value as an antidote.

Students of disease in children would do well, I think, to be on the lookout for such a syndrome.—DR. LEWELLYS F. BARKER, in *Am. J. Dis. Child.*, May, 1928.

Climacteric Arthritis

Climacteric arthritis is a definite clinical entity—a systemic, physiologic infraction locally, as well as generally expressed.

This arthritis is characterized by chronicity, an insidiously developing pain, stiffness and crepititation of the joint, usually the knee joint, with accompanying obesity, during the post-menopause, the evolutionary period of life in women, and does not appear in men. There is no focal or general infection.

The arthritis belongs to the endocrine decline; to the time of ovarian dysfunc-

tion and dysfunction of the associated endocrine chain; after the procreative machinery has served its time and purpose and is en route to nature's senile discard.—DR. S. G. BURNETT, Kansas City, in *Med. Herald*, April, 1928.

Spinal Injuries

The necessity of regarding all injuries to the spine, no matter how simple at first sight, as presenting possibilities of serious and permanent disability should be strongly emphasized, and patients should be given the benefit of a careful clinical and roentgenologic examination before being lightly dismissed.—DR. R. HAMMOND, Providence, R. I. in *J.A.M.A.*, Nov. 24, 1928.

Blood Cholesterol

The percentage of cholesterol in the blood is lowered in acute infections. It is in excess in Bright's disease, pregnancy, icterus, hyperadrenalinism, functional activity of the corpus luteum, etc.

When the uterus is not pregnant, the injection of cholesterol activates the ovarian lipoids, increases the menstrual flow and dissolves decidual tissue.—DR. MARK H. SMITH, in *Med. Times*, Feb., 1928.

Self-Inflicted Eruptions

Beware of curious-looking eruptions upon the face of a young woman, unlike anything you have ever seen before. It is probably self-inflicted.—*Urol & Cutan Rev.*, Oct., 1927.

Seminal Vesiculitis Simulates Appendicitis

Inflammation of the seminal vesicles or fallopian tubes may closely simulate the symptoms of appendicitis. In diagnosing the latter disease always rule out gonorrhœa.—DR. DIETRICH KLEMPNER, Chicago.

Pituitary Extract in Urologic Diagnosis

Intestinal evacuation through pituitary substance was used as preparation for renal radiography and pyelography in about 50 cases. The method consisted in the use of an intramuscular injection of pituitary

substance (for the most part the stronger concentration) on the day before the taking of the radiograph; one to two hours before, repetition of the injection; then introduction of an intestinal tube; and the last injection immediately before the radiograph. In this way one succeeds in obtaining completely gas-free pictures, so that even the shadows of the soft parts of the retroperitoneal cavity are presented in a suitable manner. Such pictures make the use of pneumoradiography appear superfluous.—DR. F. WILHELM, in *Med. Klin.* 24: 791, 1928.

Measles Diagnosed by Exposure to Ultraviolet Rays

The skin eruption of measles becomes visible under ultraviolet rays 48 hours before the eruption is macroscopically visible. This was verified in 14 cases in which the rash made its appearance on the skin from 33 to 76 hours after it had become visible on exposure to the ultraviolet rays.—DRS. W. A. WADSWORTH and E. A. MISENHEIMER, in *J.A.M.A.*, May 5, 1928.

Symptoms and Signs

The vast majority of patients complain of ill-health long before there are any physical signs or signs detectable by mechanical aids. The more valuable signs are revealed only by the sensations experienced by the patient.—SIR JAMES MACKENZIE.

Pain in Appendicitis

In acute appendicitis the pain will be where the appendix is. In 27 percent of cases it is in the pelvis; in children it is higher than in adults, and often retrocecal. In children, vomiting does not relieve the pain.—DR. NELSON M. PERCY, Chicago.

Conceptional Syphilis

Conceptional syphilis—or syphilis acquired *per uterum*—is more susceptible to treatment than syphilis acquired by the cutaneous route—a statement fully borne out by the splendid results obtained in the treatment of women with histories of miscarriages, stillbirths, syphilitic children and a positive Wassermann reaction. Even in the old days, before the introduction of

the Wassermann test and the use of arsenical compounds, when treatment was more or less uncontrolled and haphazard, conceptional syphilis was frequently successfully dealt with.—DR. MADELINE ARCHIBALD, Glasgow, in *Venereal Disease Information*, Sept. 20, 1927.

Pseudoappendicitis in Children

In young children a great many conditions closely simulate appendicitis and a hasty or superficial examination should never be made on a child to determine whether or not an operation is indicated.

In suspected appendicitis a thorough physical examination should be made, having all possibilities in mind. — DR. FRANK SHAPIRO, New York, in *M. J. & Record*, April 4, 1928.

Renal Colic

There is perhaps no symptom of urinary tract disorder more frequently the subject of misinterpretation than is renal colic. Of first importance is the fact that most cases of renal colic are not associated with stone and that most cases of stone do not give rise to colic. Only one-third of 58 cases of renal or ureteral stone which the writer has seen suffered with this symptom. Spasm of the renal pelvis or the ureter is the immediate cause of colic.—DR. H. P. WINSBURY WHITE, in *Practitioner (Lond.)*, Feb., 1928.

Etiology of Bunion

Shoes never produce bunion. Every bunion is the effect of the action of the sesamoids against the under surface of the head of the first metatarsal bone, plus the hereditary weakness of the ligaments, allowing a stretching of the capsules surrounding the joint and its inevitable dislocation.

Bunion is, therefore, a dislocation of the metatarso-phalangeal articulation of the great toe joint. — CAPT. HERBERT A. ROBINSON, M.R.C., in *Mil. Surgeon*, June, 1928.

Recurring Attacks of Unconsciousness

Recurring attacks of unconsciousness may be observed in adolescents presenting obvious signs of vasomotor instability; they may be of the petit mal or grand mal type;

or due to hysterical convulsions. A mild form of hysterical lapses of consciousness may be seen in patients who are intolerant to moderately severe pain and in whom a protective amnesia develops. Few diseases of the heart can produce recurrent attacks of unconsciousness over a long period of time.

Diagnosis of the true condition from the patient's own story is always difficult. It is better to await the opportunity to observe an attack in all its manifestations. A physician should not be in a hurry to express an opinion.—DR. H. L. PARKER, in *Proc. Staff Meetings Mayo Clinic*, March 21, 1928.

Iodides as an Aid in the Diagnosis of Mixed Tumors of Salivary Gland

In a mixed tumor of the left submaxillary gland there was a definite response to the oral administration of potassium iodide, the tumor first increasing and later decreasing in size. This response may prove of value in the differential diagnosis of tumors of aberrant salivary gland tissue.—DR. R. L. HILLER, Chicago, in *J.A.M.A.*, Feb. 23, 1929.

Anal Fissure

If the patient complains of pain after stools, lasting for half an hour or more, you can, in most cases, diagnose a fissure before an examination is made. The anus will be retracted, the sphincter spastic, and the examination causes sharp pain.

Have the patient strain to aid in exerting the anus gently and the fissure will come into view, either anteriorly or posteriorly. Use cocaine on the fissure so that you can pass the gloved finger without causing pain.—DR. I. H. MOORE, Seattle, Wash., in *Northwest Med.*, April, 1928.

Pain in the Shoulder

To determine whether shoulder pain is due to intra- or peri-articular disease: If the passive rotation and pendulous movement of the hanging arm is painless, a peri-arthritis is present, because the movement involves the joint only; if the movement is painful there is an arthritis of the shoulder joint.

Violent pain which radiates to the inner side of the upper arm and into the shoulder is typical for all acute bursites.

Chronic bursitis, especially those forms of peri-arthritis which develop adhesions, very rarely cause severe symptoms.—DR. A. LUX, in *Wien. klin. Wchnschr.*, Dec. 15, 1927.

The Babinski Sign

Babinski's reflex consists in the extension of the great toe when the sole of the foot is irritated, instead of the normal flexion. Sometimes there is only a small spot on the bottom of the foot where the reflex originates, so we must go all over the surface, carefully, in order to find this "trigger area."

The same reflex can sometimes be elicited by deep squeezing of the calf muscles or by strong pressure along the shin bone or at the outer side of the ankle.—DR. MEYER SOLOMON, of Chicago.

Vegetarian Diet and Skin Eruptions

Oranges, especially in the fresh-picked state, are the greatest offenders in the way of skin reactions. Tomatoes are about the only vegetable that is guilty of causing skin reactions. Cereals in excess are dangerous; their tendency is to cause acidity and thereby to disrupt the alkaline balance of the blood. Fruitarians and vegetarians, in applying their theories with the growing child, are little short of criminals. Man everywhere has adopted a well-balanced diet by instinct, without the aid of scientific research.—DR. A. DAVIDSON, in *Urol. & Cutan. Rev.*, Feb., 1928.

Differences Between Chickenpox and Smallpox

When chickenpox occurs in adults it is not quite so easy as some imagine to distinguish it clinically from smallpox. The following are differential points:

Smallpox develops leisurely, chickenpox riotously; smallpox seldom attacks the deep axilla, while this is a favorite spot for chickenpox; irritation determines the number and location of smallpox lesions,

chickenpox shows but little response to irritation; smallpox on the limbs is preferably centrifugally placed, chickenpox centripetally; smallpox lesions are deep and regular in outline, chickenpox lesions are superficial and often irregular; smallpox crusts are thick and appear "countersunk," chickenpox crusts are thin and appear "stuck on"; the freshly healed surface after smallpox is "bumpy," after chickenpox it is smooth and glistening.—DR. A. FALLER, Cincinnati, in *Ohio St. M. J.*, Dec., 1928.

Heredity in Allergic Diseases

Inheritance appears to be the chief factor in determining whether or not an individual will ever develop hay-fever or asthma, and to some extent governs the time in life when symptoms may appear. This opinion is based on the study of 1000 cases of hay-fever and asthma and more than 1000 normal persons.—DR. R. M. BALYEAT, Oklahoma City, in *Am. J. M. Sc.*, Sept., 1928.

Transmission of Syphilis by Paralytics and Tabetics

It is known that paralytics in the early stages of syphilis can transmit the disease in the ordinary ways of infection. In the stage of manifest paralysis and tabes, however, there is no clear proof that such patients can transmit the disease by direct contact.—DR. F. JAHNEL, in *Wien. klin. Wchnschr.*, July 12, 1928.

The Widal Test

The Widal test is not a test for a disease but a test for evidence of reaction to disease. The clinical significance of the Widal reaction lies in the fact that it is not a test for typhoid fever, but a procedure the sole purpose and result of which is to determine the presence in the blood serum of agglutinins for the typhoid bacillus.—DR. R. A. KILDUFFE, in *J. Med. Soc. New Jersey*, May, 1928.

Current Medical Literature

Bismuth in Plaut-Vincent's Angina

Dr. P. Mangabeira-Albernaz, Campinas, Brazil, in *Laryngoscope*, Jan., 1929, states that Plaut-Vincent's angina is a laryngeal localization of spirochetosis. The disease is produced by the symbiosis of LeDantec's fusiform bacillus with a spirochete which may be called Vincent's in default of an exact microbiologic classification.

Of the very many remedies proposed for or used in the treatment of this disease, the author finds only two series of substances that fully meet the necessary therapeutic requirements—the bismuth salts and the arsenobenzols. Bismuth has many advantages over the arsphenamines: It is less toxic, more powerful, more economical, and is immediately and certainly sedative, allaying the characteristic pain.

Neoarsphenamine is active against pain when the process is far advanced; but the author has noticed that in all localized cases of spirochetosis, the pain disappears, not to return, two to four hours after the first application of bismuth. A similar fact has been observed by all who have employed this mode of treatment.

The author believes that effects of the bismuth salts used are in direct proportion to the percentage of metallic bismuth which the salt contains. Although other preparations have been employed, he is of the opinion that if bismuth (potassium or sodium) tartrate emulsion, at 30 percent, causes overwhelming therapeutic results, it is not necessary to use larger doses of bismuth. The salt is painted over the ulcerous surface. By the use of a 30-percent bismuth tartrate paint, the author was able to allay, for periods of four hours, the most violent pains of a patient suffering from endothermic coagulation of the tonsils.

This sedative quality of bismuth deserves to be widely employed. Bismuth should be substituted for neoarsphenamine in the treatment of Plaut-Vincent's angina.

Acriflavine in Colitis

In *Jour. Med. Assn. of Georgia*, Feb., 1929, Dr. W. L. Wilkinson states that some years ago he called attention to the fact that, compared with merucrochrome, neutral acriflavine seemed to have a more specific effect on intra-abdominal infections, especially those with *B. coli*.

Dr. Wilkinson believes that acute intestinal toxemia should be looked upon as an infection rather than as a disordered metabolism, and thinks that better results would be obtained by ridding the intestine of offending organisms

than by relieving symptoms. For this reason, injections of acriflavine have been used in 15 cases, in children with severe colitis, with excellent results. In 5 of the early cases, having ten to fifteen copious, bloody stools a day, there was an almost complete cessation of symptoms after the third daily injection.

A pint of saline solution is first introduced and the bowel cleansed of fecal matter and mucus. Then 4 ounces of 1:5000 acriflavine solution is introduced, followed by one or two ounces of saline solution to clear the tube. The catheter is then slipped out, not permitting any of the fluid to escape. When the urine has become thoroughly colored, the drug should be washed out. The 4-ounce dose should be increased by 1 ounce each day until the urine becomes highly colored. For older children the initial dose should be 6 ounces and the increment 2 ounces.

Ephedrine in Spinal Anesthesia

Dr. J. K. Avent, in *New Orleans Med. and Surg. Jour.*, Oct., 1928, states that he gives 50 mg. of ephedrine sulphate, subcutaneously, 20 minutes before the spinal puncture.

The action of ephedrine in spinal anesthesia is very similar to that of epinephrin, but is much more prolonged. Its effects are due to stimulation of the sympathetic nervous system and are produced peripherally and not centrally. The rise in blood pressure is due to vasoconstriction and cardiac stimulation. Ephedrine also stimulates the stellate ganglia. With ephedrine a greater proportion of the rise in blood pressure appears to be due to cardiac stimulation than is the case with epinephrin. The advantages of ephedrine over epinephrin at once suggest its use to counteract the fall of blood pressure in spinal anesthesia.

Therapeutic Use of Neon Mercury Light

Dr. F. F. Strong, in *Med. Herald and Physiotherapist*, Dec., 1928, reports some results from "cold mercury light" treatment. This is emitted from vacuum tubes containing small amounts of neon gas, together with metallic mercury. Such a tube, when excited by an alternating current of 14,000 volts, emits an almost pure mercury spectrum practically free from heat and infrared rays. This source of light is used with filters specially designed by the author.

The light has a special anodyne effect, as proved clinically in neuralgia and lumbago cases. In hypertension also very gratifying results have been obtained, and in some cases vitalizing

and sedative effects have been observed. Burns and various skin affections are amenable to the new light which the author believes has a greater therapeutic value than any agent hitherto used in physical therapeutics.

The Tonsils

A diagnosis of diseased tonsils does not mean an operation for their removal until we have excluded all other conditions that could be responsible for the symptoms presented by these patients.

Younger children should be x-rayed for possible enlargement of the thymus.

As the patient usually complains of one or more symptoms and as the operation is one of election rather than of necessity, in the hope of being relieved of the symptoms, it should be established clearly that the symptoms arise alone from the diseased tonsils or their consequences. Systematic examination of the patient should include throat infections; ear conditions; obstructions to breathing; colds; general conditions (undernutrition, dullness, overfatigability); cervical adenitis; diphtheria carriers; asthma; and rheumatic group focal infections.—DR. O. CUMMING, Portland, Me., in *M. J. & Record*, Sept. 5, 1928.

Therapeutic Effects of Acetylcholine

Acetylcholine was introduced into therapeutics by Villaret and Besancon in 1926. In an article, published in *Presse méd.*, Paris, May 12, 1928, these authors give their further experience of its effects. They find:

1.—That acetylcholine has a powerful therapeutic action which is capable of being applied to a number of pathologic conditions.

2.—As a dilator of the arterioles, particularly those of the limbs, acetylcholine has a vaso-motor action entirely different from that of the other vaso-dilators employed in therapeutics—nitrites, histamine, etc. As a vago-mimetic substance it does not act on the pneumogastric exactly in the same way as pilocarpine or serine.

3.—The method of employment and the dosage for man have been fixed. The medicament is one easy to handle, painless in subcutaneous injections which, in therapeutic doses, cause neither immediate nor late complications. There is no cumulative effect.

4.—The subcutaneous injection of moderate doses of acetylcholine causes a more or less rapid and considerable amelioration in the following pathologic conditions: Raynaud's disease, arteritis with a stenosing tendency in the limbs, vascular spasms of various kinds, scleroderma. In certain trophic disturbances of amputation stumps and in some hyperidroses, especially the profuse perspirations of the tuberculous, the employment of acetylcholine gives interesting results.

5.—Acetylcholine seems efficacious against different functional disturbances observed in the course of arterial hypertension and against spasms of the retinal and cerebral arteries.

6.—In very high doses, with strict supervision of the cardiovascular system, the employ-

ment of acetylcholine in a series of pathologic states deserves systematic study.

The authors have begun further therapeutic researches using other homologues of choline, especially isobutyrylcholine. In a later report they will publish the physiopathologic consequences of this therapeutic study of acetylcholine and will try to explain why, in cases which seem most favorable, a certain number of failures and cases of limited action are noted.

The authors generally use 5 and 10 cc. ampules for subcutaneous injections, in which the acetylcholine is supplemented by the addition of anhydrous glucose which stabilizes it.

The acetylcholine must be absolutely pure. Preparations containing up to 50 percent of choline ought to be rejected. The injection is made hypodermically. The amount injected varies according to the condition treated. For the sweating in tuberculosis, 2 cc. suffices; for Raynaud's disease, from 5 to 10 cc.; and for stenosing arteries, from 10 to 15 cc., to be repeated after 12 hours. In paroxysmal tachycardia, 15 cc. may be injected every five or ten minutes. Much higher doses may be given without danger, if the patient be watched.

Ultraviolet Irradiation and Skin Diseases

In *Arch. Phys. Therap. X-Ray, Radium*, Oct., 1928, DR. C. B. NORRIS, Youngstown, O., states that in certain dermatoses, such as urticaria, generalized pruritus and diffuse exfoliating types of dermatitis, the occasional favorable results obtained with ultraviolet therapy are probably due to both local and systemic effects.

The author considers that, in a great many skin diseases, ultraviolet therapy is of no value. Its greatest utility, in his hands, is in scalp conditions where sufficient use of x-rays is inadvisable.

In psoriasis, eczema (particularly acute and weeping types, if there is not much infiltration), in acne vulgaris, varicose ulcers with associated dermatitis, nevi, lichen planus and a few other conditions, the author finds that, while often ultraviolet therapy is not so valuable as x-rays, it still is very useful. Alopecia areata and the loss of hair following severe infections are undoubtedly benefited by it. He uses the ordinary quartz-mercury lamp.

Lupus Erythematosus Treated with Krysolgan

In *Ann. Intern. Med.*, Nov., 1928, DR. W. H. GOECKERMAN, of the Section on Dermatology and Syphilology of the Mayo Clinic, reports that doses of Krysolgan (a gold preparation), varying considerably in amount and frequency, have given satisfactory results in 50 percent of 28 cases of the chronic type of lupus erythematosus. These results could possibly be improved by careful attention to details as experience with the drug increases.

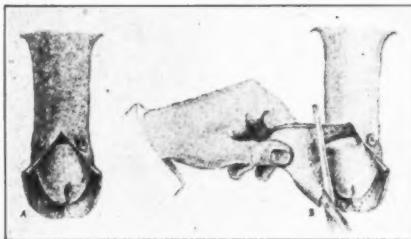
Patients vary enormously in sensitiveness to the drug but dangerous complication did not develop in this series. Some patients received up to a total of 1½ Gm. of the drug in more

than 30 injections, the injections being, as a rule, given twice weekly. In 3 of the 28 cases a morbillous eruption, general malaise and pains in the joints developed, but there was no evidence of true dissemination.

As yet, no decisive conclusions can be reached with regard to the permanency of the results; but the author thinks that, despite its disadvantages, Krysolan has probably afforded results that could not be duplicated by any other single therapeutic procedure except the use of other gold preparations. (Such, perhaps, as gold-sodium thiosulphate—ED.)

Circumcision

Drs. S. J. Sinkoe and J. B. Arteaga, in *Urol. and Cutan. Rev.*, Nov., 1928, describe a modified technic for circumcision.



All aseptic precautions are observed. With the prepuce in normal position, a 4-percent solution of novocaine (procaine) is injected about one-half inch behind the corona and including the entire circumference of the penis. The prepuce is then retracted and another circular injection is made in the mucous membrane, about one-fourth inch from the corona.

About 2 minutes later a hemostat is applied to each side of prepuce and a dorsal incision made with scissors, care being taken not to cut the penis. The incision is made to extend about one-fourth to one-half inch from the corona. The main point is to secure an even edge, which will extend around the circumference, and good approximation of the skin. At least one-fourth inch of mucous membrane should be left on the dorsal, ventral and lateral aspects. This is obtained by holding one side of the prepuce between the index finger and the thumb, trying not to include too much skin so that we cut mostly mucous membrane and not skin. Then with a large pair of scissors the side of the prepuce is cut off with one bite. This should extend from the frenum to a point where the dorsal incision ended. The other side is then cut off in the same manner.

The next step is to divide the circumference of the skin into four equal parts, catch each one with a hemostat and pull gently forward, the idea being to bring the skin forward so as to have an equal amount on all sides.

A large straight hemostat is then applied, clamped, and the redundant skin cut off with scissors.

The raw surfaces are cleansed with alcohol and the edges brought together with a continuous suture of black silk, starting at the frenum with a mattress suture.

Care must be taken to keep the dressing protected from urine. It is changed the third day.

This method gives a very successful plastic operation.

Nonspecific Urethritis

While the great majority of urethral infections are dependent upon the diplococcus of Neisser, it is well to bear in mind the possibility of the occurrence of other infecting organisms.

In *Urol. & Cutan. Rev.*, Oct., 1928, Dr. B. Erdman, Indianapolis, reports 6 cases of urethritis observed during the past five years, in which no gonococci could be cultivated from the discharge, but only an unusual organism, the *Micrococcus tetragenus*, in some cases associated with streptococci or staphylococci.

The *Micrococcus tetragenus* was isolated by Gaffsky in 1881, from tuberculous patients. In man it is usually found in sputum or saliva, without having any particular pathogenic significance. Textbooks do not mention it as an inhabitant of the genitourinary tract.

High Lights on Galvanism

The results at the two poles of a galvanic current are quite different, and may be summarized like this:

POSITIVE	NEGATIVE
1.—Oxygen gas liberated	Hydrogen gas liberated
2.—Acid	Alkaline
3.—Increased hydrogen ion concentration	Decreased hydrogen ion concentration
4.—Coagulation	Liquefaction
5.—Repels metal ions	Repels non-metal ions
6.—Decreased muscle irritability	Increased muscle irritability
7.—Vasomotor constrictor	Vasomotor dilator
8.—Sedative	Irritating

In applying ionic medication we should remember that like charges repel each other; therefore, when using a solution of a metallic salt, apply the positive pole.

The skin is a poor conductor, and so it is wise to apply heat to the part being treated, in order to increase the blood supply and the sweat, both of which, being saline solutions, are good conductors.

In determining dosage, figure on 2 milliamperes of current for each square inch of surface of the active electrode, when treating unbroken skin; and 4 ma. per sq. in. when treating denuded areas.

The inactive electrode, or dispersive pad, should be much larger than the active electrode. A good guide to the size of dispersive pads follows:

DISPERSIVE PAD	MILLIAMPERAGE ON ACTIVE ELECTRODE
4 in. x 6 in.	1 to 24 milliamperes
6 in. x 8 in.	25 to 49 milliamperes
10 in. x 12 in.	50 to 99 milliamperes

Conditions calling for the coagulation reaction of positive galvanism are: Warts, nevi, small blood tumors and other similar growths.

The liquefying reaction of negative galvanism may be used in treating recent scar tissue and superfluous hairs.

Copper ionization is useful in vaginitis, endocervicitis and endometritis; while zinc ionization may be employed in otorrhea, fistula and indolent ulcers.

The technician should always receive a written prescription for galvanic treatments, and this should show:

1.—The necessary amount of energy—milliamperage.

2.—The necessary pressure—voltage.

3.—The pole used—positive or negative for active electrode.

4.—The time—treatment duration—visits per week.

5.—Electrode application—position of electrodes. The solution to be used for the active electrode.—Service Suggestions (Victor), Nov. Dec., 1928.

A New Militant Medical Organization

Dr. E. M. Josephson, New York City, in *Med. Economics*, Feb., 1929, states that a new medical organization, the American Medical Syndicate, planned as a militant sister organization of the A.M.A., and as an American branch of the Association Professionnelle Internationale des Médecins, has been formed in New York. This latter is an association of the physicians of 26 nations, including England, France and Germany, which has adopted syndicalist methods to effect its purposes of protecting the rights of physicians, especially against discriminating legislation.

Dr. Josephson believes that private medical practice in the United States is being forced out of existence by the commercial and institutional practice of medicine and by a more or less disguised form of State Medicine. A medical organization, such as outlined above, is a necessity for protecting the interests of the profession.

According to Dr. Josephson, the Association Professionnelle Internationale has been quite successful in Europe and he thinks such an organization here would be a protection to the profession and to citizens. Information regarding the American Medical Syndicate can be obtained from Dr. Josephson whose address is 993 Park Ave., New York City.

Cardiac Arrhythmia Shown Cinematically

Drs. Lutembacher and Gaumont, in 1924, invented the telecardiophone, which permitted heart sounds to be heard simultaneously by a large number of listeners at a distance from the patient.

These physiologists have now perfected a cinematic apparatus which allows cardiac arrhythmias to be shown schematically on an illuminated screen. The auricles, ventricles,

nerve centers and His' bundle are shown in different colors; the various segments can be illuminated by a mechanical arrangement like the keyboard of a piano and the method of production of extra systoles, paroxysmal tachycardia, auricular flutter, etc., reproduced at the will of the operator and the various mechanisms explained to a large class at the same time. This new invention will greatly facilitate the study of the arrhythmias. From *Le Siècle Médical*, Paris, Dec. 1, 1928.

Tryparsamide as a Provocative Agent in Diagnosis of Neurosyphilis

Practically all syphilologists have, for the last fifteen years, recognized the value of the provocative dose of salvarsan (arsphenamine) as an aid in obtaining an accurate blood Wassermann reaction in doubtful cases.

In *Canad. M.A.J.*, Oct., 1928, Dr. E. C. Menzies states that some cases of neurosyphilis, while showing a positive blood Wassermann reaction, will give a negative cerebrospinal fluid reaction, but that a provocative dose (3 Gm. maximum) of tryparsamide will, in general, render the cerebrospinal Wassermann reaction positive.

In cases in which physical and mental symptoms were such as to lead to the suspicion of neurosyphilis, but in which the tryparsamide test proved negative, the subsequent history of the patients showed that syphilis had not invaded the nervous system.

Fatigue Intoxication

Chronic fatigue intoxication is a definite disease entity, often confused with organic disease. It is unquestionably associated with retention of and saturation with fatigue products, among which may be included creatin, sarcoclastic acid, monopotassium phosphate and carbon dioxide.

Persons in all walks of life and of all ages are subject to fatigue intoxication.

A period of complete rest and relaxation is the most logical treatment.—DR. MEYER GOLOB, New York, in *M. J. and Record*, Nov. 21, 1928.

Acriflavine in Malta Fever

Drs. Darré and Laffaille have submitted a report on the use of acriflavine in Malta fever to the Paris Academy of Medicine (Abstracted in *J.A.M.A.*, Jan. 19, 1929, p. 244), which has awakened much interest. These investigators reported complete and rapid cure of undulant fever from the use of this drug. A single intravenous injection of 0.2 Gram caused the fever, which had persisted for more than two months, to subside in 24 hours. A relapse that occurred 18 hours later was again dispelled in 24 hours by the injection of 0.2 Gram of acriflavine. The cure has now been maintained more than 3 years.

It appears, therefore, that acriflavine may be used successfully against infections caused by *Micrococcus melitensis*, as well as against in-

fections produced by Bang's bacillus (the organism causing abortion in cattle), which has also been implicated in numerous cases of undulant fever.

The following procedure is recommended:

A first injection of 0.2 Gram; a second injection of 0.3 Gram, two days later; and a third injection of 0.4 Gram, three days after the second. If relapses occur, they should be treated in the same manner as the first attack.

Further observations will be necessary to establish definitely the efficacy of the new treatment, which has aroused interest owing to the extension of undulant fever over a large area of French territory.

Hallux Valgus

Among the laity there is a current erroneous belief that bunions and hallux valgus are incurable conditions.

In *M. J. and Record*, Oct. 17, 1928, Dr. M. B. Coopermann, Philadelphia, states his belief that surgery affords the only possible means of correcting and relieving the deformity and the disagreeable symptoms of the more severe forms of hallux valgus. In the milder varieties of this condition simple excision of the degenerated bursa and exostosis suffices to relieve pain and discomfort.

The plastic capsulotomy of Silver is a distinct advance in surgical treatment, assuring excellent cosmetic and functional results. A curved incision with the convexity downward is made over the joint. The fibrous capsule is exposed and the thickened bursa removed. A Y-shaped incision is made through the fibers of the capsule so as to make three flaps, one distal, one dorsal and one plantar which are dissected free and turned back. The distal third of the first metatarsal is exposed, a thin layer of cortex with the exostosis removed, and the bone filed smooth. The articular surface is left intact. The contracted capsule on the outer surface is divided with a tenotomy by two parallel longitudinal incisions, dorsal and plantar, united by a third or vertical cut. By this capsulotomy the tension on the outer side of the joint is released and correction of the deformity is possible. The extensor longus hallucis tendon is lengthened by a Z-shaped incision, if contracted. The toe is then brought into overcorrection of 45 degrees varus and in this position the distal flap on the inner side of the joint is pulled strongly backward and sutured to the periosteum of the metatarsal. The plantar and dorsal flaps are then closed over the distal flap and the wound closed.

Resection of the head of the metatarsal should be reserved for those cases showing absorption of the articular surfaces or where spur formation impedes normal mobility.

Physical Therapy and Surgery

In *Bull. Chicago Med. Soc.*, Nov. 10, 1928, Dr. Harry E. Mock, states that in the majority of surgical conditions, common-sense use of massage by the surgeon, his interne or assistant, or a qualified nurse, directed always by the surgeon himself, combined with exercises, both

passive and active, is all the physical therapy that is necessary to hasten recovery and secure a maximum functional restoration.

In a certain number of cases the surgeon must resort to the specialist in physical therapy or must depend upon well-trained physical therapy and occupational therapy technicians to assist him in gaining the desired goal. Such technicians should be a part of the hospital staff.

In a small percentage of cases the surgeon must refer the case to the specialist in physical therapy for x-ray, ultraviolet or diathermy treatment or special muscle-training exercises. The surgeon must know when to refer his cases to the physical therapist and the latter must know when he has reached the limits of his treatment and when the case must be referred back to the surgeon.

Liver Extract in Toxemia of Pregnancy

Drs. H. A. Miller and D. B. Martinez, of Pittsburgh, in *J.A.M.A.*, Feb. 23, 1928, report their results with liver extract in the treatment of eclampsia. Two hundred and fifty-five (255) pre-eclamptic patients were treated, 59 of which were severe cases. In the mild cases, 10 cc. of liver extract was given weekly, in the form of intramuscular injections; in moderate cases, 10 cc. was given two or three times weekly and in the severe cases 10 cc. was given two or three times a day until delivery. The diet was not restricted.

The treatment is based on the fact that liver necrosis is usually an accompaniment of eclampsia, and that the impaired liver function can be supplemented by the liver extract.

Of the 255 pre-eclamptic cases, only 4 developed convulsions. In 43 patients with established eclampsia, treated during the same period, the mortality was 6.9 percent.

Jarotzky's Method of Treating Gastric Ulcer

In *Vratch. Dělo, Kharkov*, Dec., 1928, Dr. K. G. Abramwitch states that, although Jarotzky first published his method of treating gastric ulcer in 1910, it is only now that it is becoming known outside of Russia.

Jarotzky's method is a strictly dietary one. The whites of eggs are given, fasting, with fresh butter and bread pap or noodles, during the course of the day. These call for a minimum of work from the stomach. After a certain time, following diminution of gastric secretion, absence of any irritation of the gastric mucosa, the reduced volume of food and its short stay in the stomach, the conditions are favorable for cure of the ulcer.

Ten patients out of 30 treated by the Jarotzky method confirmed its value. The first day, two to three whites of eggs, 40 to 60 Gm. of butter and $\frac{1}{2}$ to 2 glasses of carbonated water (5 percent) was prescribed. The eggs and butter were progressively increased on the days following. A potato puree and some semolina were added after several days. At this time the quantity of butter given was 120 to 160 Gm.

Biscuits were allowed only some weeks after the beginning of the cure. Abramowitch thinks that the method should be modified by allowing some carbohydrates from the first day.

Electrotherapy and Prostatic Conditions

Socalled prostatic hypertrophy is not a true hypertrophy but an accumulation of fibrous tissue due to an inflammatory process. The proper term should be inflammatory enlargement of the prostate.

In *Southern Med. and Surg.*, Oct., 1928, Dr. C. H. Phillips, Thomasville, says that the rationale of electrotherapy in these cases is the softening, liquefying, disintegrating effect of negative galvanism, or else the bringing about of an acid condition.

In prostatic disease resulting from posterior urethritis the treatment is by the introduction of a hollow, hard-rubber, perforated urethral sound, the applicator in which is well wrapped with cotton saturated with isotonic salt solution and attached to the positive pole of the galvanic current, the negative pad being upon the abdomen. A current strength of 10 milliamperes is maintained for 10 minutes and repeated every fourth day. This method has given satisfactory results to the author. The object is to create a local acid condition.

In enlarged prostate there is a loss of tone of the detrusor muscle of the bladder, with sagging of the back part of the bladder and urine retention. The author's treatment consists in introducing Neiswanger's urethral electrode, well loaded with a solution of potassium iodide, attached to the negative pole of the galvanic current, with the positive pole over the abdomen. The charge is 10 milliamperes for 10 minutes. The object is the disintegrating effect of the current and to deposit iodine in the gland. A change is then made from galvanism to the interrupted faradic current for 5 minutes longer. This gives tone to the detrusor and stimulates the absorption of the decomposition products of the first operation.

For the reduction of hypertrophy, treatment is given two days later by the introduction of Neiswanger's rectal electrode until it covers the prostate. This is attached to a fountain syringe containing physiologic salt solution at 125 degrees F. The anode is attached to the electrode, with the cathode over the abdomen. The electrode is now allowed to fill two-thirds full of the saline solution, current is turned on and maintained at 30 or 40 milliamperes for 10 minutes, and repeated about three times a week. This method gives most satisfactory results in the reduction of hypertrophy.

The Causes of Flatulence

The symptom, flatulence, indicates the presence of excess gas in the bowel, or the passage of gas from the rectum in noticeable quantities. The causes are so numerous that flatulence is in itself of little diagnostic importance, but occasionally, it is the chief or only symptom, or the earliest noticeable symptom, and then its study becomes of value.

In *Annals Clin. Med.*, for Nov., 1928, Dr. Albert S. Welch, Kansas City, states that gas gets into the bowel in three ways. It may be swallowed, may be generated in the alimentary tract, or may be excreted through the bowel wall into the lumen, and gives the following outline of causes:

- I.—Swallowed Gas
 - A.—in the form of gaseous foods
 - B.—because of frequent swallowing
 - a.—on an emotional basis
 - b.—with lachrimation in eye diseases
 - c.—with nasal disease
 - d.—with pharyngeal disease
 - e.—with oral disease
 - f.—with esophageal disease
 - g.—from chemical irritation
 - h.—from mechanical irritation
 - C.—because of excessive motility of the alimentary tract
 - D.—because of decreased absorption in the alimentary tract
- II.—Gas generated in the alimentary tract
 - A.—from diseased bowel wall
 - B.—from foods
 - a.—because of the inherent food qualities
 - b.—because of faulty digestive juices
 - c.—because of poor absorptive capacity
 - d.—because of too rapid passage of food
 - 1.—through the small intestine
 - 2.—through the large intestine
 - e.—because of delayed passage
 - 1.—through the small intestine
 - 2.—through the large intestine
 - III.—Gas excreted from the blood into the bowel lumen
 - A.—because of saturation of the blood
 - a.—from inhalation of gases
 - b.—from extensive diseased regions in the body
 - c.—from improperly functioning excretory organs
 - 1.—vicariously, in extensive lung lesions
 - 2.—vicariously, with severe liver lesions
 - 3.—vicariously, in advanced renal lesions.

Prisoners of War

The history of the human race shows that enslavement, torture and degrading work has been the usual lot of the prisoner of war. In *The Military Surgeon*, Nov., 1928, Major R. C. Hellebower, U. S. A., traces the gradual improvement in the status and conditions of captives of war under advancing civilization. The Hague Convention of 1907 was the first practical universal international agreement setting forth the status, rights and privileges of prisoners of war. That this agreement materially improved conditions can scarcely be challenged.

But the experience of the World War has shown that there is still much ground for the opinion that international agreements in this respect call for revision and a much clearer definition of the details of the treatment and rights of war prisoners.

Major Hellebower expresses the opinion that a world conference should be held for the purpose of amplifying the provisions of the Hague

Conference of 1907 in regard to prisoners of war. This Conference should be independent of the League of Nations or any other international agency. The status and rights of enemy aliens might also be taken up by such a Conference. One of the important suggested improvements is that prisoners of war should be under the supervision and protection of some neutral power while still under the control of their captors. This would of course entail the right of independent inspection.

The only object of war is to disable the enemy.

Calot's Solution in Otorrhea

Calot's solution should be given a trial in all chronic middle ear suppurations of long duration. Mastoid involvement as well as cholesteatoma should be ruled out before using this treatment.

Calot's solution consists of:

Guaiacol	.....	0.00025 Gm.
Creosote	.....	1.5 Gm.
Iodoform	.....	3.0 Gm.
Ether	.....	8.5 cc.
Olive Oil	.....	up to one ounce

Over 50 cases of discharging ears have been treated by this method and over 50 percent resulted in cures. The other cases showed improvement.—Dr. J. C. SCAL, New York, in *Eye, Ear, Nose & Throat Monthly*, Nov., 1928.

Why Remove the Tonsils?

In *Eye, Ear, Nose and Throat Monthly*, Nov., 1928, Dr. J. T. Scott, St. John, Kansas, gives quotations from standard works to show that the tonsils are glands of importance with an internal and external secretion. They are headquarters for the production of lymphocytes and assist materially in deglutition.

The proper method of dealing with diseased tonsils is to cure the disease and enable them to fulfill their functions. They should be removed only if they cannot be cured and are a menace to the health. Dr. Scott has treated a large number of cases of acute and chronic tonsillitis by the high-frequency fulguration current with uniformly good results.

Cod-Liver Oil and Ultraviolet Irradiation in the Prevention of Rickets

In *Am. J. Dis. Child.*, Nov., 1928, Dr. A. D. Holmes and associates give the experimentally found comparative metabolism in seven groups of rats, controls, direct ultraviolet irradiated and directly irradiated plus 14.8, 4.9, 14.8, 19.8 and 29.7 Mg. cod-liver oil (containing 1250 units of vitamin A per Gm.) respectively, which were maintained, for 36 days after weaning, on a rachitic producing diet and on the same diet supplemented with ultraviolet irradiation or cod-liver oil.

As judged by the growth, roentgenograms of the femur and tibia, calcium and phosphorus of the blood serum and mineral content of the femur and tibia, the mineral metabolism of the

controls was decidedly inferior to that of the animals receiving the rachitic diet supplemented with ultraviolet irradiation or cod-liver oil. Aside from the control group the average increase in body weight during the 36 days experimental period was greatest for the group fed 19.8 Mg. of cod-liver oil and least for the group receiving direct irradiation and the group fed 14.8 Mg. of cod-liver oil.

In general, the results found show that 5 Mg. of the cod-liver oil has sufficient antirachitic activity to protect laboratory animals against rickets when maintained under the conditions described. The results also indicate that 5 Mg. of the oil gives greater protection than 15 minutes of ultraviolet irradiation at a distance of 36 inches and that 5 Mg. of oil appears to be as effective as larger amounts when used as a protection against rickets.

Uterine Hemorrhage and its Treatment

In *Canad. M.A.J.*, Oct., 1928, Dr. T. C. Cullen, of the Johns Hopkins University, Dept. of Clinical Gynecology, divides uterine hemorrhages into two main groups: (1) those depending on recent pregnancy, which include premature separation of the placenta, retained membranes, hydatidiform mole, chorio-epithelioma, tubal pregnancy and pregnancy in one horn of a bicornate uterus; (2) those independent of recent pregnancy, which include hemorrhages due to constitutional conditions, to benign changes in the mucosa of the cervix and body of the uterus, to malignant changes in the mucosa of the cervix and body of uterus, to the presence of uterine tumors and to diseases of the adnexa.

Thirty or forty years ago, the cause of uterine bleeding, in many cases, would not be definitely ascertained. Year after year our knowledge has been gradually increasing until now, in a large clinic, there are not over a dozen cases in a year for which some satisfactory explanation for the bleeding cannot be given.

The standard modes of treatment of most of the hemorrhages arising in cases of recent pregnancy are familiar to most physicians.

When possible, tubal pregnancy should be diagnosed and operated upon before rupture. When the patient is in shock and almost in extremis, there is a strong impulse to operate immediately; but, if the patient can be tided over for a short time and transfused just before or at the beginning of operation, the chances are very much better. Transfusion works miracles in such cases. One point to be noted in the technic when the abdomen is full of blood is this: Just so soon as the tube has been clamped so that its bleeding has been checked, and prior to its removal, it is well to pack a large roll of gauze into each flank and a large Mikulicz pad into the pelvis. By the time the operator has removed the tube these three pieces of gauze will have soaked up a large part of the free blood and much time will be saved.

Hyperplasia in young people calls for curettage every few months, if bleeding is excessive.

In cases of uterine disease, in which hysterectomy is indicated but the hemoglobin is alarmingly low, liver diet has yielded brilliant results;

patients having a hemoglobin of from 15 to 30 percent soon improve so much that operation can be undertaken with little risk.

Acetylcholine

According to R. Hunt and R. R. Renshaw, in *J. Pharm. and Exp. Therap.*, Jan., 1929, acetylcholine is very active in causing a fall of the blood pressure, even when given in small dosage.

The occurrence of a "muscarine" action; viz. stimulation of the "endings" of parasympathetic nerves and an action upon some unknown "receptors" in blood vessels, which leads to a vaso-dilation abolished by atropine, has been most frequently observed with quaternary compounds containing methyl groups united to a nitrogen atom. Hunt, some years ago, showed that the introduction of an acetyl group into choline and some of its analogues greatly increase the "muscarine" action.

Posture in Obstetrics

Dr. Julius Jarcho, of New York, in *Surg. Gynec. and Obst.*, Feb., 1929, states that the squatting position during delivery, which was much used by aboriginal women and is still employed by the Chinese, has unfortunately fallen into disuse. Yet it is undoubtedly of great aid in labor, particularly in cases of pendulous abdomen, as a preventive of transverse presentation and as an aid to weak labor pains.

The Walcher position increases the antero-posterior diameter of the inlet from 0.5 to 1.0 cm. When the pelvis is slightly contracted or the fetal head is a little oversized, in a normal pelvis, the use of this position often facilitates engagement.

The use of the obstetric chair is a help to delivery. In the home, an obstetric chair may be improvised from a rocking chair padded with blankets and pillows and a couple of stools as footrests.

The treatment of obstetric difficulties with postures should appeal particularly to the physician in rural districts where hospitals are inaccessible. It is eminently practical as a substitute for interference, especially when the environment is unfavorable to surgical procedure.

Low Voltage Currents in Dermatotherapeutics

Dr. Herman Goodman, of New York, in *Med. Herald*, Nov., 1928, says that the use of low voltage galvanic currents is very satisfactory in removing facial blemishes. Care must be taken that the needle is always attached to the negative pole. The positive pole is attached to a moist pad which may be conveniently attached to a handle held in one of the patient's hands and pressed against the other.

About 5 milliamperes of current should be the maximum used. In removing superfluous hairs, about 15 seconds is usually required for each follicle. The appearance of a white froth is usually an indication that the work is completed

but this is far from being a reliable guide. A fine sense of touch is necessary to know exactly when the needle reaches the vital spot in the follicle, which is the growing point of the hair.

For hairy moles it is often sufficient to treat the hair follicles only, not treating the mole itself. Unpigmented moles may be removed, employing the negative pole of galvanic electricity and by multiple punctures through the base with fine needles, as employed in the removal of hairs.

It is better not to use the galvanic current for pigmented moles, other than to remove hairs.

The central punctum of a spider nevus may be obliterated with negative galvanism, though the use of the actual cautery point is preferable.

Intestinal Influenza

Dr. J. F. Friedjung, in *Deut. Med. Wchnschr.*, Sept. 28, 1928, reports that he observed some cases which were undoubtedly intestinal influenza. There were three forms in which the gastro-intestinal tract participated: (1) Unceasing vomiting appeared, followed the next day by violent abdominal pains and diarrhea. The frequent stools were aqueous and fetid for 3 to 6 days. (2) Diarrhea, without vomiting, and mild fever were present. (3) Violent abdominal pains prevailed, which repeatedly aroused the fear of appendicitis. The colon was contracted, palpable and sensitive. The stools were mucous or mucopurulent. Catarrhal symptoms of the upper respiratory tract were always present and the connection with influenza was undeniable.

Myopia

Dr. P. A. Harry, in *The Prescriber*, Oct., 1928, states that a consideration of the various hypotheses regarding the causation of myopia shows that they can be divided into two groups: those depending on an increase of intraocular tension and those due to weakness and softening of the sclerotic coat. This is in keeping with the view that there are two main types of short sight: the early or congenital and the late or acquired. The first is known as progressive myopia and is usually more unilateral; the second, simple myopia, is almost always symmetrical.

Patients suffering from either type of myopia should wear the full correction for the refractive error. In this way the progress of the disease is checked, distant vision is improved and the patient is enabled to take exercise and play games.

In the case of children with congenital myopia, the child should be refracted under a mydriatic and over-correction avoided. The glasses ordered should be worn constantly and the vision taken at frequent intervals. At school, a suitable desk must be provided to enable the child to sit up and keep at a reasonable distance from his work. A good light, coming from the left side and above, is essential and no small or unsuitable print or fine needlework should be allowed. At home the child should go to bed early without a light. Reading in bed is to be prohibited, as well as fine bead-work and the use of books, pens and pencils.

Moving picture shows should be attended only rarely.

In cases where myopia is increasing rapidly (1 or 2 diopters in 4 to 6 months), all reading and school work will have to be discontinued. In high myopia without evidence of progression, close work need not be prohibited.

In the acquired myopia of older school children, over-correction is a serious error as it encourages progression by giving rise to over-use of the ciliary muscle.

Tinnitus Aurium

Dr. D. W. Drury, Boston, in *J.A.M.A.*, Nov. 17, 1928, states that analysis of 1000 cases at the Evans Memorial, Boston, 585 of which were demonstrably endocrine, showed an incidence of tinnitus in 35.6 percent in the endocrine cases and of 32.7 percent in the non-endocrine cases. While tinnitus is not a characteristic symptom of endocrine disease it is very frequently met with in hypofunction of the different glands.

The treatment of tinnitus is unfavorable when the noises do not vary and are continuous; treatment is favorable when the noises are altered or relieved by inflation; when the noises are altered by rarefaction of the air in the meatus they are due to altered tension, admitting of treatment.

Tinnitus is due to either an increase or a decrease of labyrinth pressure and with either increased or decreased blood pressure.

Sugar-saturated, Vitamin-starved America

Seale Harris, M.D., in *Amer. Med.*, Nov., 1928, holds to the opinion that the American people are consuming too much sugar and not enough vitamins. This is a problem of importance which calls for much study as well as education of the laity regarding this particular phase of diet. Sugar products are cheap, abundant and palatable and have their proper place in correctly adapted diets, affording heat and energy; there is, however, a tendency toward the excessive use of sugar among children. It is estimated that every man, woman and child in the United States eats, on an average, one-third pound (about a teacupful) of sugar a day. Other sugar products are used to excess, while many foods containing vitamins are omitted.

The child who is fed too much sugar will not consume other foods containing the factors necessary for satisfactory nutrition. Various infections, gastrointestinal conditions, rickets and other pathologic conditions result. Many infants are started off on excessive sugar diets and continue them up to and through adult life.

Dr. Harris explains why excessive use of sugar is harmful and especially points out such danger in infant feeding. The child or adult whose diet consists of excess in sugar does not eat enough vegetables, fruit, milk and other foods which contain necessary vitamins and minerals. The sugar-fed child is more prone to disease than is the one who has a well-balanced diet; investigation shows that physical

resistance is thus greatly lowered and that such an individual is predisposed to gastrointestinal disturbances, endocrine dysfunction, various infections and general untoward conditions resulting from malnutrition.

Due to lack of the proper vitamins, dental caries, pyorrhea, and mouth and throat diseases are frequent. The remedy lies in education of the laity as to the danger of too much sugar for the child as well as for the adult. Certain "soft drinks" are dangerous because of high sugar content and other undesirable elements. A normal person, from childhood to old age, should drink from a pint to a quart of milk and eat one raw fruit, one raw vegetable and two cooked, leafy, green vegetables each day. Other foods may then be used to complete a well-balanced diet.

Why Physical Therapy Fails

Physical therapy is one of the greatest assets of modern medicine but it should be used only as an adjunct and after careful study to obtain proper physiologic effects in a given pathologic condition; never in place of other methods which have proved superior.

Dr. E. L. Libbert, in *J. Indiana M. A.*, Oct., 1928, says the reasons why physical therapy fails in the majority of cases are: First, because wholly unwarranted and unscientific claims have been made by manufacturers; second, there is a lack of proper training of both graduate and undergraduate medical men; third, few truly clinical and scientific reports are to be found in medical literature; fourth, there are too many socalled physical therapy clinics conducted by non-medical persons; fifth, there has been a widespread sale to quacks and charlatans of really standard equipment, with misuse thereof.

The work of the Council on Physical Therapy of the A.M.A. is designed to correct many misunderstandings and misrepresentations in this work and at the same time, by authoritative articles, to inform practitioners of its real benefits.

Electrocoagulation and Desiccation of Tonsils

The advantages of electrocoagulation, desiccation and fulguration of tonsils are:

First: It is bloodless, the danger of hemorrhage is removed.

Second: The danger from infection, due to local anesthesia, and of death due to the general anesthetic is also abolished.

Third: The diseased parts undergo sterilization, because the current used is germicidal.

Fourth: The forcing of infective material into the circulation, which has occurred from scalpel and other guillotine appliances, is abolished.

Fifth: Last, but not least, the singing and sneaking voices are in no danger of impairment. There is almost invariably an improvement.

The disadvantages of the treatment are:

First: In small children one must be diplomatic, and have some ingenuity in order to win and not to frighten them.

Second: It takes time and more treatments are required, because of less being accomplished at some sittings compared with others.

Third. Destructive methods like desiccation and electrocoagulation require three or four treatments, at two-weeks intervals.

Fourth: The lighter method of fulguration with the unipolar current, eight or ten treatments, may be required.—A. T. NOE, M.D., in *Acme-International Bul.*

The Sterile Couple

In *Illinois M. J.*, Nov., 1928, Dr. I. F. Stein, Chicago, gives the following points in the treatment of sterile couples:

Gonorrhea plays an important part; syphilis plays but a minor part. Both husband and wife should undergo a general and local examination.

Particular attention must be given to the condition of the cervix; a preponderating percentage of female sterility is due to chronic endocervicitis.

When a post-coital examination of smears taken from the receptaculum seminis and endocervical canal are satisfactory, as regards number and morphology of spermatozoa, the male partner may be exonerated. If this test is unsatisfactory a further test of a condom specimen of semen is necessary.

The Rubin patency test (injection of air or oxygen) is applied to the female when the sterility is apparently in her. This simple test is not merely diagnostic but therapeutic; pregnancy has followed its use too often (in 15 of the author's cases) to be considered coincidence. It has also led to a wider utilization of roentgenography of the pelvic viscera, by means of transuterine pneumoperitoneum. With the addition of the radio-opaque liquids, notably iodized oil, the lumens of the uterus and fallopian tubes can be visualized, thus locating obstruction or establishing patency beyond doubt.

The roentgenogram, after the combined use of iodized oil and pneumoperitoneum, yields the maximum information concerning the pelvic viscera obtainable without laparotomy.

Although neither husband nor wife may be actually sterile there may be an incompatibility, due either to vitamin deficiency or endocrine disturbance in one or both partners.

In Boston, a group consisting of a gynecologist, urologist, internist and endocrinologist, has formed for the complete investigation of sterile couples.

The author has observed no serious complications in over 350 pneumoperitoneal injections.

Irradiation of Ovaries and Hypophysis in Menstrual Disorders

In *J.A.M.A.*, Nov. 3, 1928, Drs. Della G. Drips and Frances A. Ford, Rochester, Minn., describe their experimental and clinical investigations of the value of irradiation of the ovaries and hypophysis in disturbances of menstruation.

The continued study of a group of cases of primary oligomenorrhea and amenorrhea and of

menorrhagia and metrorrhagia has confirmed the impression of an essential ovarian hypo-activity in both conditions.

The occurrence of spontaneous remissions and the variable results with all forms of treatment add difficulty to the evaluation of a new method.

Low dosage irradiation of the ovaries or hypophysis offers an additional therapeutic measure in intractable cases. The low dosage irradiation has given a comparatively high percentage of favorable results in view of the severity of symptoms in the cases in which it has been used, and regulation, when attained, has continued over a relatively long period.

In experimental studies which are still incomplete, an attempt was made to gage the amounts of roentgen rays for application to the ovaries of white rats which might be comparable to low dosage irradiation in the human being. Certain immediate variations in the estral cycle without disturbance of late regularity were obtained. In most instances fertility was not affected. The second and third generations of the irradiated rats were normal. It was not possible to demonstrate precocious sexual development of immature rats by irradiation of the hypophysis with varying amounts of roentgen rays.

Quinine Intravenously in Malaria

In *J.A.M.A.*, Nov. 3, 1928, Dr. K. F. Maxey, as a contribution to the work of the special committee appointed by the Therapeutic Research Committee of the Council on Pharmacy and Chemistry of the A.M.A., reports that there is little or no evidence to show that the therapeutic effect of quinine is secured by a direct action of the drug, as such, on the parasites in the red blood cells. It is probable that it acts indirectly by the formation of a decomposition product or by stimulation of some natural antibody, or through a combination of these. The intravenous injection of quinine does not possess any superiority, *per se*, over ordinary administration by mouth, and the method is not without danger to the patient. It should be reserved for those patients who present distinct clinical indications, particularly when oral administration is not practical for one reason or another. With proper precautions as regards technic, the dangers of the method may be largely obviated.

Tonsillectomy in Existing Cardiac Disease

Much has been written in regard to the effect of a local focus of infection, such as diseased tonsils, in initiating and perpetuating infectious cardiac disease.

Dr. Waldo B. Farnum, of the Adult Cardiac Clinic, St. Luke's Hospital, New York City, in *Am. J. Med. Sc.*, Oct., 1928, states that 180 of 526 patients suffering from various heart diseases, mostly organic, had their tonsils removed. The operation was done under ether in most instances. These patients have been under observation in the clinic long enough to draw definite conclusions, which are as follows:

The tonsillectomy did not arrest the progress of the heart condition to any marked degree.

In some such patients tonsillectomy may initiate an attack of acute rheumatic polyarthritis or an actual spread of endocardial or myocardial disease.

Tonsillectomy does not by any means stop the recurrence of sore throat nor have a very great effect on the recurrence of chorea.

From the facts observed it seems fair to conclude that, in adults with existing cardiac disease, the hope for improvement following tonsillectomy has been based on a shaky foundation. If tonsillectomy is to be used as a therapeutic measure its best results will be obtained before the incidence of heart infection or very early in its course. Rheumatic carditis in all its phases is but one phase of a generalized infection spoken of as rheumatic fever. The removal of tonsils, although accomplished before the incidence of such carditis, will not insure the prevention of such incidence.

Nervous Dyspepsia

A patient need not have a neurosis or even be neurotic to suffer from so-called nervous dyspepsia. This has an organic basis (generally the effect of self-drugging), just as surely as do the symptoms of other clinical entities. The differential diagnosis must be made by a process of exclusion; it can be safely made only after the most careful and painstaking history and examination, and perhaps ninety-five percent of the findings of the examiner will be negative results.

Such intrinsic diseases as gall-bladder or biliary diseases, peritoneal adhesions, gastrointestinal ulcerations, gastritis and achlorhydria, carcinoma, appendicitis, colitis, diverticulosis, tuberculosi or other infections, hemorrhoids and fissure in

ano must be excluded; also extra-gastrointestinal lesions, such as central nervous system syphilis, intercostal neuralgia, herpes zoster, angina pectoris, etc. Many clinical entities may have to be thought of, only to be excluded.

The usual findings in nervous dyspeptic patients are spastic colon, atonic and redundant colon or visceroptosis.

The treatment is to be approached with the viewpoint of reestablishing adequate gastrointestinal rhythm, influencing bacterial or dietary conditions, improving general hygienic habits and breaking up introspective tendencies.—DR. L. D. CODY, St. Louis, in *Illinois M. J.*, Nov., 1928.

Tissue Penetration by Ultraviolet Rays

Drs. W. T. Anderson and D. I. Macht, of Newark, N. J., in *Brit. J. Actinotherapy*, Oct., 1928, describe a number of experimental investigations in animals which, they state, definitely establish, both quantitatively and qualitatively, the transmission of the short ultraviolet rays through living animal tissue. Between 6 and 10 percent of the rays corresponding to wave-lengths 2537 to 3000 Angstrom units were transmitted for a thickness of 1.2 mm.

Whether these short ultraviolet rays can produce biologic reactions when the tissues are so penetrated is a problem for the biologist. In rickets, the therapeutic effectiveness of ultraviolet rays corresponding to wave-lengths 2650 to 2800 A.U. has already been demonstrated.

The experiments showed that there is a great difference according as the rays pass through fully living, partly living and dead tissue. The biologic effect of the rays on living skin is entirely opposed to the effect on dead skin.

The Practitioner Can Do It

There are two glaring fallacies frequently set forth by those who advocate group-medicine as a substitute for the individual family doctor. The first is that all patients who consult doctors need exhaustive examinations to find out what is the matter with them. The second, that modern medical skill can solve all medical problems—"that it has taken clinical practice from the realm of guesswork to the realm of certainty."

While it is true that some medical problems are very complicated, it is fortunate that most of them can be solved with comparative ease by any competent, well-trained man. Obscure cases which tax every resource of modern medicine are occasionally encountered; but what conscientious physician will refuse to recognize his limitations?—

WINGATE M. JOHNSON, M.D., in "Harper's Magazine," December, 1928.

NEW BOOKS

Wakeley & Buxton: *Surgical Pathology*

SURGICAL PATHOLOGY. By Cecil P. G. Wakeley, F.R.C.S. (Eng.), F.R.S. (Edin.), Hunterian Professor, Royal College of Surgeons of England, etc.; and St. J. D. Buxton, M.B., B.S., (Lond.), F.R.C.S. (Eng.), Junior Surgeon and Junior Orthopaedic Surgeon, King's College Hospital, etc. With 392 Illustrations. Many of Which are Fully Coloured. New York: William Wood and Company. 1929. Price \$12.50.

The aim of the authors is to provide a textbook which shall give to students such an account of the pathologic side of surgery as may help them with their clinical work.

Although amply illustrated, the book is intended to be read contemporaneously with the study of actual museum specimens of the diseases treated of and, so far as possible, with their study in the clinical wards.

The authors trace the pathology of each surgical disease from its inception through its various manifestations. Controversial matters regarding pathogenesis are avoided and only the most generally accepted theories are given. Thus many matters such as mixed tumors, around which an enormous literature has grown, are dismissed with a paragraph or two. This seems a prudent and commendable course as there is no use in confusing the student in his initial studies of pathology.

The book is well printed, well illustrated and well indexed. It forms an excellent introduction to special pathology for the student, but would be little more than a "refresher" for the practical surgeon.

Hertzler: *Local Anesthesia*

THE TECHNIC OF LOCAL ANESTHESIA. By Arthur E. Hertzler, A.M., M.D., Ph.D., L.L.D., F.A.C.S., Professor of Surgery in the University of Kansas; Surgeon to the Halstead Hospital, Halstead, Kansas; etc. Fourth Edition. With 146 Illustrations. St. Louis: The C. V. Mosby Company. 1928. Price \$6.00.

In presenting the fourth edition of his book on the technic of local anesthesia, Dr. Hertzler remarks that the problem it attempts to solve is, not what operations can be done under local anesthesia, but which can best be so done.

Almost any operation can now be done under local anesthesia; the matters of essential importance are the skill of the anesthetist in applying the standardized technics and the indications for the kind of anesthesia to be used. Dr. Hertzler's book is aimed toward these two points. In many operations he presents tech-

nics which he has personally found of value, regardless of what the technics of others may be.

In the 21 chapters comprising the volume, the various operations are arranged regionally and the suitable technic described and, where necessary, illustrated.

While fully satisfied in regard to the value and scope of local anesthesia, Dr. Hertzler does not adopt a tone of dogmatism but puts the pros and cons fairly. The book will be read with interest by surgeons but especially by technicians. The type is clear and easily read and the illustrations are excellent and ample.

Maranon: *The Climacteric*

THE CLIMACTERIC (THE CRITICAL AGE). By Gregorio Maranon, Professor of Medical Pathology in the Madrid General Hospital, Member of the Royal National Academy of Medicine. Translated by K. S. Stevens. Edited by Cary Culbertson, A.B., M.D., F.A.C.S., Associate Clinical Professor of Obstetrics and Gynecology, Rush Medical College of the University of Chicago; etc. St. Louis: The C. V. Mosby Company. 1929. Price \$6.50.

Dr. Maranon is well known to American endocrinologists and physiologists for his many original contributions to those sciences. His book on the "Critical Age" (the climacteric) originally appeared in Spanish in 1919 and this first American translation has been made from the second Spanish edition which appeared in 1925. It has the advantage of critical editorial notes by Dr. Cary Culbertson, as the author's views were to a great extent confined to observations on Spanish women.

There are 27 chapters. By the critical age the author does not mean what is usually understood here as the menopause alone, but rather that whole period of life during which there is a general endocrine secretional involution, especially of the gonads, both in the male and in the female. Every phase of this is thoroughly discussed in the chapters composing the book.

We might remark incidentally that, according to American conceptions, the climacteric does not refer exclusively to the involutionary changes in the advanced period of life, but also includes other epochs, such as puberty and menstruation, marked by characteristic endocrine activity.

The appearance of Dr. Maranon's book in English is, we consider, timely. On the whole the literature concerning the menopause—in the widely accepted use of this term here—is rather scanty in book form, yet the subject is one of the highest importance, seeing that it affects half of the adult population who reach maturity, and

one that must be faced. Every practitioner of medicine should be fully acquainted with all climacteric phenomena as he is bound to meet them extensively. That they are not well treated now is due primarily to ignorance both as to what is to be expected and the basic underlying conditions.

The book is well printed. It ought be in every practitioner's library. The price is rather high but, on account of the importance of the subject, it should not be grudged.

Harrower: Endocrine Diagnostic Charts

ENDOCRINE DIAGNOSTIC CHARTS. With Other Related Information. Compiled by Henry R. Harrower, M.D. Glendale, Calif.: The Harrower Laboratory, Inc. 1929. Price \$1.00.

While most physicians are convinced of the enormous importance of the endocrine gland secretions in physiology and pathology, yet the great drawback in dealing with conditions, which might reasonably be ascribed to disorders of these secretions, has been a means of more or less satisfactory diagnosis of any particular gland or glands in fault.

From the vast literature on endocrinology, Dr. Harrower has collected and tabulated such data as was available on the subject of diagnosis of endocrine disorders. A good deal of this is in the form of charts and tables which give the prominent symptoms of hyperfunctioning, hypo-functioning and glandular aplasias.

We do not remember ever to have seen any similar collection of such information gleaned from literature and therapeutic experience.

While the reader will at once see that the book carries a good deal of advertising matter for the Harrower Laboratory, this should not detract from its value as a comprehensive *vade mecum* of facts which are not otherwise available in a compact collected form.

Means & Richardson: The Thyroid

OXFORD MONOGRAPHS ON DIAGNOSIS AND TREATMENT. Edited by Henry A. Christian, M.D., Sc.D., L.L.D. Volume IV, *The Diagnosis and Treatment of Diseases of the Thyroid*. By James H. Means, M.D., Jackson Professor of Clinical Medicine, Harvard University, etc.; and Edward P. Richardson, M.D., John Homans Professor of Surgery, Harvard University, etc. New York: Oxford University Press. 1929. Price, complete set of ten volumes, \$100.00.

This book, Vol IV of the Oxford Monographs on Diagnosis and Treatment, boils down the enormous literature concerning the thyroid into a comfortably handled volume which contains the pith of present-day knowledge of the physiology of the thyroid gland and the surgical or other treatment of its disorders.

The average practitioner reading the current literature generally gets rather confused ideas of our present-day real knowledge of the ramifications of thyroid functioning and disorders. Here we get first-hand information from such an authoritative clinical source as the Thyroid Clinic of the Massachusetts General Hospital, devoted specially to the clinical study of this

phase of medical science. The book describes the nature of the various disorders of the gland, of the ways of recognizing them and of the medical and surgical treatments. There are plenty of illustrative clinical cases with charts and all other necessary details.

The Thyroid Clinic has been in existence since 1913, and there has been a special follow-up study of a large number of the patients treated.

The volume, which is bound in loose-leaf form, so that new material may be added from time to time, contains 9 chapters, 4 of which are devoted to different types of goiter.

This is a book which every practitioner who wishes to be up to date in his knowledge of the thyroid should have in his library.

Bose: Plant Autographs

PLANT AUTOGRAPHS AND THEIR REVELATIONS. By Sir Jagadis Chunder Bose, M.A., D.Sc., L.L.D., F.R.S., C.I.E., Member Intellectual Co-operation League of Nations, Founder and Director Bose Institute, Calcutta. With 120 Illustrations. New York: The Macmillan Company. 1927. Price \$2.50.

There are still good things that come from the wisdom of the East. Dr. Bose has long been known in Europe and in America as an original thinker and investigator in the biologic and medical fields who has made many notable contributions to physiology, especially.

In the present book Dr. Bose, who has investigated plant movements and the nervous mechanism which regulates the vital processes in the living plant, has reported some of his methods and findings. This subject is by no means new, but Dr. Bose has succeeded, by means of many ingenious mechanical devices, in translating the movement of cells, tissues and fluids so that the plant records its own life history.

While one may reasonably have surmised it, yet it is a definite advance to have an ocular demonstration of the fact that there is scarcely a life-reaction in any higher animal that is not, to some extent at least, duplicated in plant life. One might almost be tempted to think that plants have some sort of a brain, limited no doubt in its functions but still capable of directing movements and processes which are vital for the life of the plant. Dr. Bose says that plants have hearts.

This volume affords most interesting and instructive reading—almost like a fairly tale, except for its atmosphere of valid, scientific research—and we can heartily commend it to every lover of the ways of nature.

Medical Clinics of North America

THE MEDICAL CLINICS OF NORTH AMERICA. Southern Interurban Clinical Club Number. Volume 12, Number 5, March, 1929. Philadelphia and London: W. B. Saunders Company. Issued serially, one number every other month. Per Clinic year, Paper, \$12.00, Cloth, \$16.00.

The March, 1929, number of the *Medical Clinics of North America* is devoted to clinical

papers by members of the Southern Interurban Clinical Club.

Dr. C. C. Bass opens with a good paper on pellagra, in which he favors the view that the disease is one due to infection.

Other papers of particular interest to the general practitioner are those of Dr. C. L. Eshleman on "Some Types of Hypertension"; by Dr. F. M. Johns on "Amebiasis"; by Dr. Cabot Lull on "Hemoptysis: Its Diagnostic Importance"; by Dr. J. S. McLester on "Thyroid Deficiency as a Cause of Poor Health"; by Drs. Jas. E. Paullin and H. M. Bowcock on "Glycosuria"; and by Dr. F. W. Wilkerson on "Dietetic Difficulties in the South."

Altogether there are 28 papers in this number.

Pottenger: How to Combat Tuberculosis

TUBERCULOSIS AND HOW TO COMBAT IT. A Book for the Patient. By Francis M. Pottenger, A.M., M.D., LLD., F.A.C.P., Monrovia, Calif. Second Edition. St. Louis: The C. V. Mosby Company. 1928. Price \$2.00.

Several books for the use of patients suffering from tuberculosis have appeared during the last year or so; one by an authority on the subject like Dr. Pottenger should take a prominent place.

Dr. Pottenger takes the stand that an intelligent appreciation of the disease by the patient is one of the most potent factors in combatting it, and in this book he sets out to give the tuberculous patient a thorough understanding of the nature of the disease and of the measures proved to be of value in its prevention and treatment. These are 44 short chapters covering every phase of the subject and which anticipate the questions usually put by tuberculous patients.

This is the second edition. It may be recommended with confidence by physicians to any patient; the language is simple and the matter understandable without special knowledge.

Waddington: Electro- and Phototherapy

PRACTICAL INDEX TO ELECTRO AND PHOTO THERAPY. Including an Index of Diseases with Descriptive Techniques. By Joseph E. G. Waddington, M.D., C.M. (Bennett), Fellow American Medical Association, American Electro-therapeutic Association, American College of Physical Therapy, etc. Third Edition, Rewritten and Enlarged. Illustrated. Detroit, Mich.: A. M. Margaroff Co., 110 Atkinson Ave., 1929. Price \$7.50.

The author believes that there is a lack of and an insistent demand for a work on electro- and phototherapy which shall confine itself within certain definitely circumscribed bounds and which should give sufficient practical fundamental theory for clear and easy understanding of practical technic. This book is an endeavor to supply this need in regard to the physics and technics of the low- and high-tension currents.

The physical therapist ought to have a sound knowledge of the physical sciences, but

not many practitioners of today have had the time, apart from their medical education, to acquire such a knowledge of the physics of light and electricity as the casual reading of some of the chapters in this book would seem to call for in order properly to understand their applications. Possibly when physical therapeutics, both in theory and practice, form a part of the medical curriculum, physicians will be better able to grasp the scientific basis on which practical electrotherapeutics depends. Dr. Waddington's work might well form a class book for such studies.

Nevertheless, the fact that this textbook has now run into three editions proves that it has made its appeal, and there can be no doubt that it is a thoroughly scientific presentation of the subject which should be particularly attractive to technicians, to those physicians who have taken the trouble to master the physics of the subject, but especially to those who have become physical therapeutic specialists.

For the general practitioner who employs physical therapy, within the compass of the subjects treated in this book, the chapters on the selective technics in particular diseases seem to be the most valuable and applicable.

Leriche & Pollicard: Physiology of Bone

THE NORMAL AND PATHOLOGICAL PHYSIOLOGY OF BONE. Its Problems. By R. Leriche, Professeur de Clinique Chirurgicale à la Faculté de Strasbourg, and A. Pollicard, Professeur d'Histologie à la Faculté de Lyon. Authorized English Translation by Sherwood Moore, M.D., Professor of Radiology, Washington University School of Medicine, and J. Albert Key, M.D., Assistant Professor Clinical Orthopedic Surgery, Washington University School of Medicine. Illustrated. St. Louis: C. V. Mosby Company. 1928. Price \$5.00.

Occasionally a book appears which is a distinct departure from the ordinary commonplace literature. In the realm of medicine, Leriche and Pollicard's book on the physiology of bone is such a book—it marks progress, a departure from stereotyped and hidebound conceptions and it opens up a new field in which the possibilities for new crops of important findings, both in pathology and therapeutics, are enormous.

If the conceptions of Leriche and Pollicard, in regard to osteogenesis, are right (and they are the fruit of ten years of intense study by a clinical surgeon and a professor of histology), then most of our current opinions on the formation and repair of bone must be thrown into the discard and we must start anew in the light of the facts, amassed by the authors, and their consequences.

Ollier's views regarding the necessity of periosteum in the regeneration of bone have been shattered, but nevertheless it still plays an important role.

Briefly, the views of the authors may be condensed as follows:

1.—Bone is a connective tissue modified by metaplasia, and this modification is governed, above all, by humoral processes. Bone is not the result of a secretion by specific cells.

2.—All new bone formation is due to a con-

comitant rarefaction, either of bone or of calcified elements. Conversely, all rarefaction of bone or calcified elements can lead to new bone formation in the connective tissue in its vicinity.

3.—After bone rarefaction the fibrous tissue, freed of its calcareous impregnation, is susceptible of undergoing a series of evolutions which are normal to all connective tissue.

4.—Bone rarefaction is due to an augmentation of the blood circulation. On the other hand, stasis of the interstitial fluids favors new bone formation.

The authors, in general, consider that the main underlying agencies influencing bone formation are chemical. It is to biochemistry that we must look for the solving of problems in regard to osteogenesis. They point, justly, to the recent advances in our knowledge of rickets, based on biochemical investigations.

In translating this remarkable book into English, Drs. Moore and Key have done a serviceable work and have done it well. The language is smooth, and it is to be presumed, as we have not seen the original, that the idiomatic French phraseology has been correctly interpreted.

Every physician and surgeon who wishes to keep abreast of modern scientific progress in medical thought should have this book.

Krishnamurti: Freedom

LIFE IN FREEDOM. By J. Krishnamurti. New York: Horace Liveright. 1928. Price \$2.00.

Of all the things that men have striven for, from time immemorial, none has been sought with greater diligence and enthusiasm than has freedom; but, on close inspection, the search seems to have been largely fruitless. Our negro slaves were "freed" during the Civil War, but, mostly, they exchanged a rather mild variety of servitude for a much more ruthless slavery to the industrial machine.

On careful thought one can think of no nation and scarcely a human being who is truly free; but Krishnamurti says there is a way, and points out the path to it. Freedom can come only to the man who is absolutely self-reliant, because he has learned the truth and found the real self within him. He who finds any external person or thing essential to him, is, to the extent of his dependence, a slave.

Hear a few of his sayings:

"So long as there is doubt in the mind there is no peace, nor certainty and ecstasy of purpose."

"Happiness alone gives life to the mind and nourishment to the heart."

"Desire is the motive power behind all action . . . desire brings experience, and experience leads to knowledge . . . If desire is killed or suppressed, there is no possibility of freedom." And yet, he says, one must free himself of all desire for things for himself. "Control without suppression" is the desideratum; and arrival at the stage where one can say, "I need nothing from anyone," a high goal.

"Truth is life, but it can only be understood with an unbiased mind, capable of detachment and pure judgment."

"Contentment without understanding is like a pool covered with green scum . . . Revolt,

with intelligence, with understanding, is as a great river that is full of power . . . Comfort cannot dwell with understanding."

The old teaching, "Believe and follow Me," he replaces by a new word; "Know, and stand in your own strength."

Every man has unique powers and capabilities which should be developed. Imitation and reliance upon "authorities" are obstacles to freedom. "Every individual in the world should be his own master, his own absolute ruler and guide."

This is a refreshing book, but rather startling to those who have been accustomed to lean upon dogmas and stereotyped ideas. It is almost terrible in its simplicity. Complacent people and those who are entirely satisfied with their present outlook on life will be jarred by it; but those who are discontented at heart and are seeking a new presentation of life's vital truths will find it immensely stimulating.

Coghill: Anatomy and Behavior

ANATOMY AND THE PROBLEM OF BEHAVIOR. By G. E. Coghill, Member of the Wistar Institute of Anatomy and Biology, Philadelphia. Lectures Delivered at University College, London. New York: The Macmillan Company. Cambridge, England: At The University Press. 1929. Price \$3.00.

This is a highly technical little book, reporting original researches of the author as to the correlation between the development of the nervous system and the behavior (largely reflex) of the water lizard, *Ambystoma*. It has no immediate clinical interest and will be of value solely to advanced research workers.

Aalsmeer & Wenckebach: The Circulatory System in Beri-Beri

HERZ UND KREISLAUF BEI DER BERI-BERI-KRANKHEIT. Von Dr. W. C. Aalsmeer und Prof. Dr. K. F. Wenckebach. Mit einer Abbildung im Text und 2 Tafeln. Berlin and Wien: Urban and Schwarzenberg. 1929. Price Mk. 8.

The authors have made a study of the heart and circulation in Beri-beri. They consider this of importance, not alone on account of this particular disease, but from the general viewpoint of circulatory disturbances.

Tidy: Symptomatology

AN INDEX OF SYMPTOMATOLOGY. By Various Writers. Edited by H. Letheby Tidy, M.A., M.D., Oxon., F.R.C.P., Lond., Assistant Physician, St. Thomas's Hospital; Consulting Physician, Royal Northern Hospital. With One Hundred and Thirty Illustrations, Some in Colour. New York: William Wood and Company. 1929. Price \$12.00.

This book represents the contributions of 26 leading English clinicians each of whom has attained a position of eminence in the particular field with which he deals.

The general object has been to give a clear and reasonably full description of the clinical

manifestations of each disease in its common broad aspects, not dealing with minor complications and variations.

A textbook of symptomatology such as this is valuable to the student who is pursuing the clinical, bedside study of disease, because it tells him what symptoms to look for in cases already clinically diagnosed, and because it will help him to build up an experience of disease complexes. For the experienced clinician the work will be of service in helping him to differentiate cases concerning which he is in doubt.

The text is arranged alphabetically, according to the common disease nomenclature, so that it is easy to find, at once, what is wanted. There is a supplemental index for synonyms at the end.

Pruitt: Injection Treatment of Hemorrhoids

INJECTION TREATMENT OF INTERNAL HEMORRHOIDS. By Marion C. Pruitt, M.D., L.R.C.P., S. (Ed.) F.R.C.S., (Ed.) F.A.C.S., Associate in Surgery, Medical Department, Emory University, Georgia Baptist Hospital and Grady Hospital; Proctologist, Davis-Fischer Sanitarium and Anti-Tuberculosis Association; etc. Illustrated. St. Louis: The C. V. Mosby Company. 1929. Price \$3.00.

In this little volume the author gives his experience with and shows the value of the injection method of treating internal hemorrhoids. His idea is to put the matter fairly before the profession so as to remove much of the doubt that exists in regard to this mode of therapeutics.

There are 16 chapters as well as a chapter of illustrative case reports. Much of the text includes descriptions of piles, their etiology and pathology; but the chapters describing the technique are concise and clear and should enable a practitioner, who may desire to try this method, to carry it out successfully.

Forrester: Industrial Surgery

IMPERATIVE TRAUMATIC SURGERY WITH SPECIAL REFERENCE TO AFTER-CARE AND PROGNOSIS. By C. R. G. Forrester, M.D., F.A.C.S. New York: Paul B. Hoeber, Inc. 1929. Price \$10.00.

In this volume the author does justice to a rather difficult task.

The book is practical, well systematized and thoroughly up to date. It is divided into 21 chapters, embracing the principal and more important subjects which come under the heading of Imperative Traumatic Surgery, though the title, "Industrial Surgery" would seem to express the thought to better advantage. However, even a casual inspection of the work proves its merit.

The illustrations and photographic reproduc-

tions are instructive and rather well executed. The index is thorough. As a ready reference book for the man in general practice, and as a textbook for students, this volume serves its purpose well.

M. T.

Tindal: Gleanings from Practice

GLEANINGS FROM GENERAL PRACTICE. By David Tindal, M.D., F.R.P.S. (Glasgow). New York: William Wood and Company. 1929. Price \$2.50.

From his long experience as a general practitioner, the author has accumulated many items concerning practice which are not to be found in ordinary textbooks. These hints and experiences are jotted down here for the benefit of junior practitioners.

The book may be regarded as the advice of an old practitioner to a young one. Such records of observations, derived from clinical practice, are of incalculable value to the new medical graduate who, as a rule, has far too little clinical experience for many years following his entry into practice.

There is a good chapter of formulae of useful prescriptions.

The medical student or young practitioner (or even many older ones) who reads a book like this, feels as though he had called a wise consultant, and will find his work, at the bedside and in the office, more satisfactory in consequence.

Ross & Fairlie: Anesthetics

HANDBOOK OF ANAESTHETICS. By J. Stuart Ross, M.B., Ch.B., F.R.C.S.E., Late Lecturer in Practical Anaesthetics, University of Edinburgh, and H. P. Fairlie, M.D., Anaesthetist to the Western Infirmary and the Royal Hospital for Sick Children, Glasgow. With an Introduction by the late Hy. Alexis Thomson, C.M.G., M.D., F.R.C.S.E., Professor of Surgery, University of Edinburgh; and Chapters by W. Quarry Wood, M.D., F.R.C.S.E., and H. Torrance Thomson, M.D. Third Edition. New York: William Wood and Company. Edinburgh: E. and S. Livingstone. 1929. Price \$3.25.

This small volume gives a condensed account of modern anesthetic views and practice.

The authors lay emphasis upon the relation of anesthesia to general medical service, rather than upon elaborate descriptions of apparatus and methods. The first four chapters are, therefore, devoted to the forces which modify the physiology of the patient during an operation under a general anesthetic. This should give a sound basis on which to form an estimate of the value of any anesthetic agent.

There are 23 chapters in which the main features of general, local, spinal and sacral anesthesia are dealt with.

MEDICAL NEWS



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Tall Oaks from Little Acorns

The Cook County Hospital, Chicago, is now one of the largest institutions of its kind in the country, and its humble beginnings are shown above.

The frame building in the center of the picture (now covered with stucco above) was used for the care of cholera patients, in the epidemic of 1866. It was moved, on river tugs, from its original to its present location, and became the Bridgeport morgue.

Now it is a soft-drink and candy emporium. How are the mighty fallen!

Advances in Treatment

The June number of *American Medicine* will be devoted to advances in treatment and management of cases. If it meets the standard of previous special numbers it will be worth seeing.

A Medical Orchestra

That all doctors are not narrow followers of one line of effort is proved by the fact that, in Akron, Ohio, there is an orchestra

of 29 pieces, composed entirely of physicians, dentists and medical students. This group of artists was established, in 1896, by Dr. A. S. McCormic, who, in professional life is an anesthetist and prominent in medical organization.



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Discoverer of Tularemia

At least one piece of recent research work has been carried out wholly in the United States, without any foreign assistance, and that was the identification of tularemia and its etiologic organism.

The man who did this work is Dr. Edward Francis, of the U. S. Public Health Service, and he was recently awarded the gold medal of the American Medical Association, in token of his accomplishment.

World League for Sexual Reform

Under the leadership of some of the world's foremost psychologists and sociologists, an association has been formed whose avowed purpose is: "To help to create a

new legal and social attitude (based on the knowledge which has been acquired from scientific research in sexual biology, psychology and sociology) towards the sexual life of men and women."

The next (third) congress of the League will be held in London, Eng., Sept. 9 to 13, 1929. Full particulars may be had by addressing (with a stamped return envelope) Dr. Norman Haire, 127 Harley St., London, W. 1, Eng.



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India's Prize Baby

A "Health Week" was held recently in South India, and a feature of the occasion was a baby show, at which the Governor's trophy was awarded to the young lady shown above. Her name is Marakadavalli, and she is six months old.

Information on Radium

The March number of the *Radiological Review* was devoted entirely to radium and its uses, and should bring us up to date on the therapeutic application of this important element.

Opening in Wisconsin

Due to the death of a physician who has enjoyed an excellent practice in Stevens Point, Wisconsin, there is a good opening in that city of about 15,000 inhabitants, in the central part of the state.

For full particulars, write to Mrs. Ethel A. Lawrence, 817 Main St., Stevens Point, Wis.

The Stork's First Lieutenant

The record for individual obstetric service, according to the *Medical Pocket Quarterly*, is held by Dr. J. B. Gordon, of Bunker, Mo., who in his 56 years of practice, has welcomed 6,774 babies into the world. Are there challengers for his title of "The Great Deliverer"?

A Location in Montana

There seems to be an opening in Montana for a recent graduate who will engage in country practice. A large county with 1800 inhabitants has no physician—in fact, there is none within 40 miles. The climate and the roads are good and the people are reasonably prosperous and eager for medical help.

For full information, write to The City Drug Store, Winifred, Montana.

Medal to Dr. Bovie

The John Scott medal and a \$1000 prize from the City of Philadelphia have recently been conferred upon Dr. W. T. Bovie, head of the department of biophysics, Northwestern University, for his work in developing surgical apparatus which substitutes the electric current for the knife.

Postgraduate Course in France

We are informed that there will be a postgraduate course in ear, nose and throat surgery for American physicians, at the University of Bordeaux, France, commencing July 22, 1929.

Dr. Leon Felderman, 413 Mitten Bldg., Philadelphia, Pa., is in charge of registering the American physicians for this course.

Send For This Literature

To assist doctors in obtaining current literature published by manufacturers of equipment, pharmaceuticals, physicians' supplies, foods, etc., CLINICAL MEDICINE AND SURGERY, North Chicago Ill., will gladly forward request for such catalogues, booklets, reprints, etc., as are listed from month to month in this department. Some of the material now available in printed form is shown below, each piece being given a key number. For convenience in ordering, our

readers may use these numbers and simply send requests to this magazine. Our aim is to recommend only current literature which meets the standards of this paper as to reliability and adaptability for physicians' use.

Both the literature listed below and the service are free. In addition to this, we will gladly furnish such other information as you may desire regarding additional equipment or medical supplies. Make use of this department.

- Q- 2 Your Prestige and Profit. 8-page booklet. The Carroll Dunham Smith Pharmacal Co.
- Q- 3 Storm Binder and Abdominal Supporter, 4-page folder by Dr. Katherine L. Storm.
- Q- 5 Ethical Medicinal Specialties. 8-page booklet. A. H. Robins Co.
- Q- 7 The Cure of Cystitis, Pyelitis and other Inflammatory Conditions of the Urinary Tract. Chicago Pharmacal Co.
- Q- 17 An Index of Treatment. Burnham Soluble Iodine Co.
- Q- 20 A Survey of Focal Infection. Fellows Medical Co.
- Q- 45 Vera-Perles of Sandelwood Comp. Paul Plessner Co.
- Q- 47 Campho-Phenique in Major and Minor Surgery. Campho-Phenique Company.
- Q- 49 The Calcreose Detail Man. Maltbie Chemical Co.
- Q- 50 Outwitting Constipation. Standard Oil Co.
- Q- 56 Regaining Health. How Science Can Guide You! The Fleischmann Company.
- Q- 58 The Pharmacology of Cod Liver Oil. Smith, Kline & French Co.
- Q- 85 Ultraviolet for Health. Hanovia Chem. & Mfg. Co.
- Q- 93 Light Therapy. Britesun, Inc.
- Q- 95 Everything for the Sick. Lindsay Laboratories.
- Q-103 The Electron, April, 1929. McIntosh Electrical Corporation.
- Q-112 Atophan after more than Fifteen Years of ever expanding use, etc. Schering & Glatz.
- Q-116 Hemo-Glycogen, The New Product Hemoglobin Compound and Liver Extract. Chappel Bros., Inc.
- Q-120 Building Resistance. William R. Warner & Co., Ltd.
- Q-139 How to Save Children from Goiter. Morton Salt Company.
- Q-156 Siomine (Methenamine Tetraiodide). Pitman-Moore Company.
- Q-169 The Quartz Lamp, Apr. 15, 1929. Hanovia Chemical & Mfg. Co.
- Q-176 The Hormone, April — 24 pages and cover, published bimonthly. The Harrower Laboratory.
- Q-189 High Blood Pressure — Treatment with Theocalcin. E. Bilhuber, Inc.
- Q-194 Fracture Book — 1928 Edition. DePuy Mfg. Co.
- Q-196 "Facts Worth Knowing." Intravenous Products Co. of America, Inc.
- Q-197 Bulletin. Illinois Post Graduate Medical School, Inc.
- Q-199 Activin in Non Specific Protein Therapy. Ernst Bischoff Co.
- Q-204 News and Views from French Lick. French Lick Springs Hotel.
- Q-211 The Etiology and Treatment of Hay Fever — Hay Fever Antigens. The National Drug Co.

Q-218 Eupinol. A distillate produced at a special temperature from the resinous wood of *Pinus Palustris*. The Tilden Company.

Q-222 Autumn Leaves—Guatonic. Wm. R. Warner & Co., Inc.

Q-227 The Romance of Digitalis. The Hoffmann-La Roche Chemical Works, Inc.

Q-228 Ye Olden Day Cough Physic. The Tale of a Drug which Columbus gave to Isabella. The Hoffmann-La Roche Chemical Works, Inc.

Q-231 The Action and Use of Castor Oil. The Wm. S. Merrell Company.

Q-232 Pectoral Balsam Merrell. Wm. S. Merrell Company.

Q-233 Gland Tidings. G. W. Carnrick Co.

Q-235 A Real Problem Solved (Clinical Medicine). The Health Cigar Co.

Q-236 Throughout the Span. Advanced Age. William R. Warner & Co., Ltd.

Q-237 Bedtime Nourishment. Mellin's Food Co.

Q-239 Battle Creek Solar Arc Lamp. Sanitarium Equipment Company.

Q-243 Nichols Nasal Syphon. Negative Pressure. Nichols Nasal Syphon, Inc.

Q-244 I Am Oxiphen! Pitman-Moore Co.

Q-247 Colitis, A Common and Increasing American Disease. The Battle Creek Food Company.

Q-249 Diathermy in the Treatment of Pyorrhea and Other Oral Diseases. McIntosh Electrical Corporation.

Q-250 Relieve that Pain with Infra Red Rays. McIntosh Electrical Corporation.

Q-255 Mellin's Food Biscuits. Mellin's Food Co.

Q-256 The Modern Way of Giving Digitalis. Upsher Smith Co.

Q-258 Prophylaxis. August E. Drucker.

Q-262 Journal of Intravenous Therapy, April, 1929, Loeser Laboratory.

Q-267 Uncle Sam Health Food. Uncle Sam Breakfast Food Co.

Q-268 Eat Uncle Sam Health Food. Uncle Sam Breakfast Food Co.

Q-269 Special Source No. VI. Traumatic Surgery. Illinois Post Graduate School.

Q-270 Pharmaceuticals of Established merit. E. Bilhuber, Inc.

Q-271 The Intestinal Flora. The Battle Creek Food Company.

Q-277 Cicatrical Resolvent. Fibrolysin. Merck & Co., Inc.

Q-278 The Story of the Modern Headache Remedy. The Cause of Weak Hearts and Sudden Deaths. Keasbey & Mattison Co.

Q-281 Differential Diagnosis in Renal Diseases. Reed & Carnrick.

Q-286 Ultra Violet Therapy in Your Office. A. S. Aloe Co.

Q-289 Symposium on the Intravenous Administration of Glucose. Loeser Laboratory.

Q-290 Injection Method of Treating Varicose Veins with Sodium Salicylate. Loeser Laboratory.

Q-292 Acidosis and Infection—Alka-Zane. William R. Warner & Co., Inc.

Q-297 Prescription Folder. Burdick Corp.

Q-298 Recent Advances in Dietetics. Battle & Co.

Q-299 Practical Uses of the Electrocardiogram. Victor X-Ray Corporation.

Q-300 Useful Every Day. E. Bilhuber, Inc.

Q-301 Merrell's Salicylates. The Wm. S. Merrell Company.

Q-302 Alkarhein in Gastro-Intestinal Disorders. The Wm. S. Merrell Co.

Q-303 Victor News, Vol 1, No. 2. Victor X-Ray Corporation.

Q-304 Illness Comes on Horseback but Goes Away on Foot.—Guatonic. Wm. R. Warner & Company, Inc.

Q-305 American Heart Association, Its Plan and Work. Victor X-Ray Corporation.

Q-306 Automobile Road Map of Germany. German Health Resorts.

Q-307 Lest you be confused. Reed & Carnrick.

Q-308 Health Books and Exercises by John Harvey Kellogg, M.D.

Q-309 The Jones Basal Metabolism Unit. Geo. W. Brady & Co.

Q-310 Conclusions from published research on the value of Ceanothyn as a hemostatic. Flint, Eaton & Co.